116, 175, 439

"Simultaneously with these military clashes commercial penetration of Taiwan was going on. By the treaty of Tientsin with Great Britain, Taiwan, the former capital of the island (now Tainan), was opened to foreign commerce. In 1860, the year of the ratification of the Tientsin treaty with France, Tamsui was also opened to trade (1). The pioneers

1. Regarding the causes of this opening it is stated in Article VI of the treaty: 'Experience having demonstrated that the opening of new ports for commerce is one of the necessities of the age, it has been agreed that the ports...'

were Jardine Matheson and Company and Dent and Company, two well-known and influential British firms in Hongkong, which in 1858 established trade connections with Taiwan and in 1860 opened offices there. The chief article of export from Taiwan in which they were interested was camphor, while in imports their interests were limited to opium (2). Opium was known in Taiwan before that date, but the years 1860-95 saw

2. Opium was 'practically the only import in which foreigners were interested' wrote Davidson, the American consul in Taiwan for some years.

the greatest spread of this evil. To support the interests of the business firms, British and later American and other consulates were opened in Taiwan. In 1863 the Imperial

Chinese Maritime Customs—actually a foreign-controlled agency in China to service the debts of the Chinese government—began to function at Tamsui. It is interesting to note that at first the customs office was opened on board the opium-receiving hulk Pathfinder, property of Jardine Matheson and Company; at about the same time the British consul opened his offices at Takao on board the opium-receiving hulk Ternate belonging to Messrs Dent and Company. This illustrates the close connection which at that time existed between the Customs, British officials, merchants, and the opium trade. These merchants on several occasions used their own force to compel the Chinese to accept their demands. In 1868 after one such 'small local war' (3) in which British marines had

3. The pretexts for such 'wars' were not difficult to find. Two gentlemen, for example, forced their way into Chinese property to which they had some claim, breaking down the door which was fastened by nails, but were met by 'a mob of [18] some 500 coolies.' 'The two gentlemen attempted immediate flight, but before they had gained many steps they were assailed in the most violent manner with guns, knives, spears and stones by the ferocious ruffians. Mr. Bird was struck down by a stone and beaten and stabbed with spears and muskets,' etc., etc. (Davidson, op. cit., p. 200). Miraculously, both gentlemen remained alive and in command of their faculties. Gunboats appeared on the scene to lend very effective support to their claims.

taken part, although there [18] was not a shadow of hostilities between China and Great Britain at that time, the British compelled the Chinese officials to abolish the camphor monopoly, to recognize the right of foreigners to travel and buy freely, the right of the missionaries to reside and work in the island, etc."

4:Grajdanzev--48 [2] S-4 (no date) 1942 Formosans
116, 241, 439, 656, 177.45 Japan
636.45

"Rice, as we shall see, is a cash crop; probably not less than two-thirds of the crop finds its way to the market. Sugar cane which constitutes from 12.2 to 19.3 per cent of the total, has special importance because the whole crop is marketed. Sweet potatoes and vegetables are chiefly for home consumption. Next in importance, in the order named, are tea, bananas, groundnuts, pineapples, tobacco, jute, and cassava. This almost complete dependence on rice and sugar cane is the result of government policy, as before 1905 the distribution of cultures was not so specialised. But now Taiwan has become a part of the economy of Japan and its function is to serve that country's needs."

4: Grajdanzev--51 S-4 (no date) 1942 Formosans
116, 243, 439, 177.43 Japan
636.43

"The unique position of rice in the economy of Taiwan justifies a more detailed discussion. Rice culture was important before the Japanese came to the island and rice exports to China were quite considerable. However, since the Japanese took control the production of rice has doubled in about a quarter of a century and more than half of the total production now goes to Japan. The credit for this achievement is usually given to the Japanese administration and the expansion has been taken as proof of the beneficent results of Japanese rule."

4:Grajdanzev--55 S-4 (no date) 1942 Formosans-1-2
116, 243, 262, 435, 439

"Of course, the inclusion of Taiwan—a region of low prices—in Japan's customs area of high prices should result in an increase of prices in Taiwan, but this does not mean that Taiwan's farmers were necessarily the gainers. All prices were raised and it is by no means certain that this rise benefited farmers and workers. We may find an indirect answer to this question by calculating the average per capita consumption of cereals in Taiwan. Rice is the principal food for the islanders, and all other cereals produced there amount to less than 0.5 per cent of the production of rice and, consequently, may be neglected. Import and export data are available and Japan may serve as the standard of comparison. To simplify matters we assume that the crop of a given year and the imports of that year are consumed in the same year.

Rice Consumption in Taiwan*

	Crop (1,000 koku)	Imports (1,000 koku)	Exports (1,000 koku)	Balance (1,000 koku)	Population (1,000)	Annual per capita consumption (koku)
1905	4,354	57	620	...	3,039.8	1.25
1910	4,187	43	648	3,582	3,250.0	1.10
1915	4,785	64	767	4,082	3,479.9	1.17
1920	4,842	160	619	4,383	3,655.3	1.20
1925	6,443	718	2,057	5,104	3,993.4	1.28

*Footnote on next page.

Rice Consumption in Taiwan* [Cont.]

	Crop (1,000 koku)	Imports (1,000 koku)	Exports (1,000 koku)	Balance (1,000 koku)	Population (1,000)	Annual per capita consumption (koku)
1930	7,480	97	2,220	5,357	4,592.5	1.17
1935	9,122	7	4,493	4,636	5,212.4	.87
1936	9,559	7	4,788	4,778	5,452.0	.88
1937	9,233	7	4,842	4,398	5,609.0	.78
1938	9,619	15	4,878	4,756	5,747.0	.83
1939	9,152	8	4,106	5,054	5,880.0	.86

* In calculations made for the compilation of imports and exports before 1930 one koku of rice is taken as equal to 2.7 piculs.
Sources: for 1930-39: Keizai nenkan; for 1905-25: for production, Takahashi, op. cit.; for trade, Nippon boeki seiran. The last column is calculated."

4:Grajdanzev--56 S-4 (no date) 1942 Formosans-1-2
116, 171, 262, 439, 511, 177.43 Japan
636.43

"Taiwan is famous for its rice production of which it exports almost half. The opinion of Japanese economists is that exports of Taiwan's rice to Japan brought to the island suc prosperity that some measures had to be taken to curb it. But the data presented in this table [See page 55--analyst] show quite a different picture. In 1905 the annual per capita consumption of rice in Taiwan was about 1.25 koku. Then it fell, but an increase in production brought it back to that level in 1925. At about that time the heavy exports of Taiwan's rice to Japan started: These exports brought a sharp fall in per capita consumption—it fell to 0.87 in 1935 and has remained on about the same level since that time. Now, 0.87 koku per year is about 0.8 pound per person per day. It was pointed out that the production of other cereals in Taiwan is almost nil. Only sweet potatoes form a signif icant addition to the diet (more than one lb. per person per day). Some wheat flour is imported but this amounts to only two to three per cent of the exports of rice (by weight).

These figures are for the total population. But the urban dwellers are probably better off than the farmers, so that the average for farmers should be less than 0.87 koku. Exports of rice from Taiwan to Japan cannot therefore be taken as a sign of Taiwan's prosperity, for they resulted in a fall in standards of living for the Chinese in Taiwan. Data for the last five years show that the annual average consumption of rice in Japan is about 1.10 koku, while in Taiwan it is 0.84. In other words, per capita consumption of rice in

4:Grajdanzev--15-16 S-4 (no date) 1942 Formosans
116, 162, 175, 439

"However, it would be a mistake to overemphasize these uprisings. Life was not easy under the conditions described above, but it was better than in Fukien and a definite development was taking place. Before 1600 hardly a thousand Chinese lived on the island; in the middle of the 18th century there were, according to Luchow, two and a half million. This may be an exaggeration, but it is a fact that at the end of the 19th century there were three million Chinese in Taiwan, engaged mainly in the cultivation of rice and sugar. About four hundred vessels were then plying between Taiwan and the mainland exchanging the produce of the island for that of China and in 1893, for example, 21 million lbs. of tea. 5.3 million lbs. of camphor and 98 million lbs. of sugar were ex-[16]ported. Taiwan rice played an important part in the economy of Fukien, as did oilcake, which was used as fertilizer. Taiwan sugar made up a great part of the sugar consumed in North China, and her camphor was a not unimportant item in China's foreign trade. This brief inventory is very important because it shows that the present-day character of Taiwan is not the creation of its present rulers, but is the result of a long historical process, though the progress under Chinese administration was slow in comparison with later developments."

4:Grajdanzev--56 S-4 (no date) 1942 Formosans-2
116, 171, 262, 439, 511, 177.43 Japan
636.43

Japan is thirty-one per cent higher than in Taiwan, though the Japanese consume in addition considerable amounts of wheat, barley, and other cereals, which are almost entirely absent in Taiwan, to say nothing of sweet potatoes."

4:Grajdanzev--56-57 S-4 (no date) 1942 Formosans
116, 241, 439, 441, 655, 177.43 Japan
636.43

"The price ruling on the Tokyo market is, however, not the price which the farmer in Taiwan receives. Between him and the Tokyo or Osaka market are landlords, usurers, a chain of local dealers in rice, big Japanese importers and exporters, and Japanese shipping companies. Each one of them makes profits, [57] and good profits, so that little remains for the farmer, and especially the tenant-farmer.

However, the advice of Takahashi and others fell on fertile ground and, beginning with November 1, 1939, the export of rice from Taiwan to Japan became a government monopoly. The government-general decides how much rice should be produced, works out a plan of exports for each month, buys rice from the special local organizations, and sells it to a Japanese company, Nippon Beikoku Kabushiki Kaisha (Japan Rice Corporation). The other suggestion of the Japanese economists concerning the lowering of the price of rice in Taiwan may also be attempted, though it will be difficult to realize in a time of war inflation and rice shortage in Japan."

4:Grajdanzev--57-59 S-4 (no date) 1942 Formosans-I-2
116, 242, 429, 654, 177.24 Japan
636.24

"At the time of annexation the Japanese [58] government was anxious to improve their 'unfavorable' balance of trade with foreign countries, and the cultivation of sugar cane in Taiwan appeared to be an excellent means of doing this. Japan's imports of sugar at that time were in excess of twenty million yen—about ten per cent of her total imports, and at times equal to the 'unfavorable' balance of trade. Sugar cane is grown in Japan, but climatic conditions and limited area make it impossible to increase the total production significantly. At the most it can supply only a small percentage of the domestic demand for sugar. But Taiwan with its tropical climate could be successfully used for this purpose.

As early as 1896 seeds of improved types of sugar cane were imported from the Hawaiian Islands. In 1898, Kodama, the Governor-General of Taiwan, and his energetic Governor Goto began conferences with Japanese financiers on the question of investment in the sugar industry of Taiwan. A special investigation of the outlook for sugar cane culture in Taiwan was entrusted to Dr. Inazo Nitobe, who presented his report in 1901. In this report Dr. Nitobe recommended that the irrigated area and the area under cultivation be increased through various measures of encouragement, assistance, and direct government action, the establishment of sugar research stations, and the introduction of improved varieties of sugar cane, while other recommendations were made concerning sugar manufacture. The government followed these recommendations, established experimental

stations, imported new varieties of sugar cane from Hawaii and Java, and paid special subsidies and grants to the manufacturers and farmers to induce them to follow its policy. Up to March 31, 1932, it had paid about thirteen million yen in subsidies. Moreover, in 1903 a relatively moderate protective tariff on sugar imported into the Japanese Empire was introduced, the rate being 0.8 sen per kin (0.6 kg.) on No. 20 standard and higher. This rate was increased to 4.65 sen per kin in 1911 on No. 21 standard and higher, to 5.3 sen in 1927 on No. 22 standard and higher, and to 7.15 sen in 1932. As a result—this is the official version—wealth came to the sugar [59] industry and to the island 'and this has resulted in the present industrial prosperity'."

4:Grajdanzev--65-66 S-4 (no date) 1942 Formosans-2

116, 245, 439, 511

[66] Average production for the last five years was 18,038,000 kin, average exports 17,362,000 kin."

116, 245, 439, 511

"Tea produced in Taiwan is chiefly of three sorts—black tea, oolong tea (famous for its aroma) and pouchong tea "wrapped'—paochungch'a. Production is as follows:

Production and Exports of Tea in Taiwan

Quantity (1,000 kin = 600 kg.)

	1914	1934	1935	1936	1937	1938
Oolong tea	...	5,292	5,280	5,049	3,48[illegible]	4,519
Pouchong tea	...	5,666	5,685	5,923	4,905	5,929
Black tea	...	6,021	5,490	6,508	10,562	9,835
Total production, incl. others	22,000*	16,997	16,468	17,486	18,955	20,285
Exports		16,641	15,768	16,741	18,604	19,057

Values in thousand yen

	1934	1935	1936	1937	1938
Oolong tea	3,562	3,538	3,571	2,871	3,715
Pouchong tea	3,075	3,086	3,394	3,163	3,677
Black tea	4,250	3,964	4,518	7,418	6,844
Total Incl. others	10,894	10,594	11,486	13,452	14,237
Exports	11,047	9,325	10,200	12,851	12,742

* Approximately

Sources: Keizai nenkan; Nogyo nenkan; Taiwan Jijo.

4:Grajdanzev--66 [21 S-4 (no date) 1942 Formosans
116, 245, 439

"Another important product is the banana. The tree is indigenous to Taiwan, but only under the Japanese have bananas become an important export item. The growth of production may be seen from the following table:

	1909	1921	1935	1936	1937	1938
Area (thousand ko)	0.6	6.1	20.6	22.5	21.9	21.5
Production (million kin)	10.5	86.2	322.5	339.5	364.3	336.8
Exports (million kin)	...	...	231.9	228.7	261.3	222.5
Value of exports (million yen)	...	...	10.2	11.2	12.3	17.6

As the figures show, a considerable portion of the crop is consumed in Taiwan—18.5 kin (11.1 kg.) per person per year, a fact which may be partially explained by the perishability of the fruit. The total value of bananas produced in Taiwan in 1937 was estimated by authorities at ¥8,133,000, but exports comprising only about two-thirds of the crop for the same year, were valued at ¥12.3 million, which means traders and carriers were getting more than half the value of exports.

This export is very likely to develop farther. Production is concentrated in Taichu, Tainan, and Takao prefectures. In Taichu the fruit is produced all the year round, but in Takao it ripens only from April to July."

4:Grajdanzev--86-87 S-4 (no date) 1942 Formosans-1-2
116, 171, 262, 435, 439

"As to the general supply of fish for the population of Taiwan, the Japan Year Book has the following to say: '. . . The Taiwanese are a fish-eating people, but the annual catch is so great that a large quantity is exported to Japan proper [87] and other countries' (1).

1. P. 941, 1939-40 edition.

Statistics of the industry tell a different story. Compared with Japan the natives of Taiwan are poorly supplied with fish, for in 1937 the value of fishery products in Japan proper was ¥660,807 or about ¥9.3 per capita as compared with ¥3.8 in Taiwan. It is true that an important part of this catch is exported from Japan and a part is used as fertilizer, but the same is true for Taiwan. As may be seen from the following table, Taiwan is a net importer of fish:

External Trade of Taiwan in Fish
(1,000 yen)

Year	Exports to Japan	Exports to other countries	Gross exports	Imports from Japan	Imports from other countries	Gross imports	Net imports
1937	4,111	832	4,943	10,095	687	10,782	5,839
1938	3,006	491	3,497	11,535	405	11,940	8,443

116, 171, 262, 435, 439

The secret of this coexistence of exports and imports of fish does not lie in any over-abundance. The Japanese in Taiwan export fresh fish to Japan which they sell for an average price of 26 sen a kin (0.6 kg.), and import two kinds of fish: (a) salted and dried fish at an average price of 12.5 sen a kin and (b) canned fish. It is clear that these two kinds of imported fish are not consumed by the same groups of the population.

We saw above that the population of Taiwan consumes more meat on the average than do the Japanese; now we see that the Japanese consume much more fish than the islanders (2).

2. It was mentioned above that the average consumption of pork in Taiwan is about 37 kin, while in Japan it is only 3 kin; but the average consumption of fish in Japan must be, on the most conservative estimate, 60 to 70 kin."

4:Grajdanzev--103 S-4 (no date) 1942 Formosans
116, 392, 439

"Machine and Vehicle Production in 1937 Consisted of These Items:

	(1,000 yen)
Agricultural machinery, including that for the sugar industry	730
Other machinery and apparatus	5,071
Vessels	730
Vehicles	405
Other products	1,656
Total	8,592

This production by no means satisfies the needs of industry and transport of the island, and the imports of machinery, vehicles and vessels are now valued at thirty to forty million yen a year."

4:Grajdanzev--103 [2] S-4 (no date) 1942 Formosans
116, 323, 339, 439

"Composition of Ceramic Products by Value in 1937
(1,000 yen)

Bricks	3,063
Tiles	923
Cement	3,264
Cement tiles	503
Other products	1,075
Total	8,828

As may be seen from the figures quoted, this industry is practically limited to the production of cement and bricks. Production of cement in 1936 was equal to 143,076 tons and about an equal amount is imported from Japan."

4:Grajdanzev--104 S-4 (no date) 1942 Formosans
116, 371, 387, 439

"Taiwan is a heavy importer of fertilizers, because its domestic industry supplies a very small part of its needs. In 1936, for example, of 147,600 tons of sulphate of ammonia consumed, only 13,059 tons were produced in Taiwan. But this offers a promising field for development because Taiwan is rich in cheap water power (1).

1. In 1937 two large Japanese companies organized Taiwan Kagaku Kogyo Kaisha (Taiwan Chemical Co.) with a capital of ¥10 million, for the production of sulphate of ammonia. It was planned to increase production in the future to 100,000 tons of sulphate of ammonia; but data on the progress of the company are not available and, judging by the imports, production has not advanced to plan. The plant of the company was to be near Sinchiku."

116, 316, 433, 439

"Actual production of coal reached its maximum in 1927, when 1,850,000 tons were produced. After that a decline set in, the lowest point occurring in 1932 (1,355,000 tons). With the general revival, production rose to 1,550,000 tons in 1935 and in 1937 to 1,744,000 tons. However, the low development of industry and the poverty of the population combine to [109] make the marketing problem difficult. Production capacity is considerably larger than actual production, and as may be seen from the following table, the market for coal is chiefly outside Taiwan.

Consumers of Taiwan's Coal 1932-34

	Quantity (1,000 tons)	% of total
Industry	399.7	27.6
Railways	150.5	10.4
Homes	48.8	3.4
Shipping	498.8	34.4
Exports	330.0	22.8
Other	21.3	1.4
Total	1,449.1	100.0

Source: Taiwan ginko chosa kacho, quoted by K. Takahashi.

Thus only slightly more than forty per cent of the output is consumed in the island

itself. Taiwan is capable of producing more coal than it does now, but the limiting factor is the smallness of the domestic market."

4:Grajdanzev--120-121 S-4 (no date) 1942 Formosans-1-3
116, 439, 505, 705

"The products of Taiwan can be brought to Japan only by sea: it was pointed out above that air freight-transport is insignificant because it is too expensive. As will be shown in the next chapter, the external trade of Taiwan is chiefly with Japan. The following table gives information on the shipping line connecting Taiwan with Japan and the continent.

This table shows that coastal shipping in Taiwan is not developed. The only line of importance is Keelung--Karenko, which is a necessity because the eastern railroad is not connected with the railroad network of the island, freight being transported exclusively by ships. Information concerning the lines connecting Taiwan with Japan shows how close are the commercial relations between the two countries,.... Lines connecting Taiwan with Manchuria direct and via Korea (Takao--Seishin) are of recent origin, while it will be observed that there are many more lines connecting Taiwan with China and with Southeastern Asia than is commensurate with the trade of Taiwan with these regions. The lines connecting the island with China probably serve the army and organizations connected with it, for Taiwan is the supply base for the armies now operating in South China.

Taiwan's Shipping Lines, in 1939

Line	Number of vessels plying	Number of voyages (minimum per year)	Tonnage of vessels used (minimum)
Keelung--Kobe	6	84	8,000 tons or more
Takao--Tokyo	6	90	4,000 "
Takao--Tokyo*	2	24	2,500 "
Takao--Seishin (Korea)	2	12	2,000 "
Takao--Jinsen (Chemulpo) Korea	2	24	2,000 "
Takao--Dairen (Kwantung, Manch.,)	2	46	4,000 "
Takao--Tientsin	2	24	2,000 "
Takao--Shanghai	2	36	2,000 "
Keelung--Amoy	1	36	1,500 "
Keelung--Hongkong	2	48	1,500 "
Takao--Canton	1	24	1,500 "
Keelung--Java	2	12	3,000 "
Keelung--Philippines	3	24	3,000 "

Taiwan's Shipping Lines in 1939 [Cont.]

Line	Number of vessels plying	Number of voyages (minimum per year)	Tonnage of vessels used (minimum)
Takao--Aparri (Philippines) since 1938	1	30	3,000 tons or more
Calls of Southern lines	2	24	5,000 "
Keelung--Karenko (Taiwan)	2	300	2,500 "
Coastal line, East of Taiwan	2	70	700 "
Takao--the Pescadores	1	156	700 "
Shinko--Koto†	1	60	50 "
Calls of European lines (Tokyo--London)	8	24	8,000 "

* Used for 'special purposes of the Army'

† Islands to the southeast of Taiwan, a part of the government-general. [Botel Tobago--analyst]"

4:Grajdanzev--131 S-4 (no date) 1942 Formosans
116, 439, 652, 177.65 Japan
636.65

"It might seem more appropriate to examine Taiwan's public finances in a later chapter after a survey of the administrative machinery and its functions. However, one important consideration makes it necessary to consider them here. Our investigation of Taiwan's economy cannot be considered complete without an examination of its external trade, which plays a very important part in the life of the islanders. But the exceptionally heavy movement of goods from the island to Japan cannot be understood simply on the basis of trade or the structure of Taiwan's economy. Certain non-economic factors must be examined before a satisfactory explanation of the movement of commodities can be made. By far the most important among these factors is the government budget, which involves tremendous sums--judging by the standards of the islanders."

4:Grajdanzev--142 S-4 (no date) 1942 Formosans
116, 439, 177.43 Japan
636.43

"We use the term 'external trade' of Taiwan because trade with Japan, cannot from the legal point of view be considered as 'foreign' trade. Throughout the following pages 'external trade' includes the trade of Taiwan with all other countries (including Japan)."

Taiwan's External Trade (In Million Yen)

	Export	Import
1896-1900 average	14.6	18.1
1901-1905 "	20.9	22.1
1906-1910 "	39.4	36.6
1911-1915 "	63.0	56.6
1916-1920 "	158.1	117.0
1921-1925 "	205.3	136.5
1926-1930 "	252.0	186.8
1931-1935 "	273.3	194.7
1936 "	387.9	292.7
1937 "	440.2	322.1
1938 "	456.5	366.7
1939 "	592.9	408.7

In 42 years exports increased from 14.6 million yen (average for 1896-1900) to 592.9 million in 1939, and imports from 18.1 million to 408.7 million for the corresponding dates, an increase of 41 and 23 times respectively. This trade is distributed among countries as follows: [143]

Exports

	1896-1900 average	1911-1915 average	1926-1930 average	1936	1937	1938	1939
Great Britain	1	877	1,053	1,372	2,095	1,499	817
France		539	289	241	250	221	194
Germany		978	76	84	83	239	329
Italy			777	2	0	8	279
U.S.A.	659	5,689	4,866	6,146	6,420	4,141	9,365
Br. India	2	129	13	221	175	36	29
Australia		46	35	421	569	282	220
Canada		299	10	117	224	67	114
Dutch East Indies		880	4,103	370	325	246	259
China	9,182	3,864	19,529	7,879	5,575	7,972	33,840
Hongkong	1,869	419	4,553	2,667	3,333	700	142
Manchoukuo				851	1,356	5,180	8,703
Kwantung		59	938	4,008	4,903	14,144	27,417
Japan	2,860	49,122	215,210	358,895	410,259	420,104	509,745
All others	6	120	518	4,675	4,608	1,615	1,216
Total	14,579	63,020	251,970	387,949	440,175	456,454	592,939

4:Grajdanzev--142-144 S-4 (no date) 1942 Formosans-3
116, 439

	1896-1900 average	1911-1915 average	Imports 1926-1930 average	1936	1937	1938	1939
Great Britain	1,326	2,340	3,083	392	792	204	146
France	7	25	57	51	96	131	
Germany	212	998	7,213	3,327	1,203	1,165	1,585
Italy		5	86				18
U. S. A.	957	1,252	3,413	2,908	2,934	2,550	1,750
Br. India	407	1,876	8,475	3,199	2,957	3,206	3,853
Australia	71	35	471	234	4		57
Canada		3	499	446	281	18	155
Dutch East Indies	37	311	2,365	1,843	3,282	2,101	4,529
China	6,771	6,970	25,893	8,622	6,201	1,954	4,253
Hongkong	536	100	76	126	95	6	7
Manchoukuo				19,618	17,185	17,817	22,082
Kwantung		494	2,352	6,878	7,088	7,891	10,299
Japan	4,888	40,071	127,666	243,832	277,895	327,950	357,608
All others	2,878	2,128	5,188	1,210	2,111	1,666	2,308
Total	18,090	56,608	186,837	292,686	322,124	366,659	408,650

[144] Trade By Countries In Percentages of Total Exports

	1896-1900	1926-30	1936	1937	1938	1939
Great Britain	0.0	0.4	0.4	0.5	0.3	0.2
France	0.0	0.1	0.1	0.1	0.0	0.0
Germany	0.0	0.0	0.0	0.0	0.1	0.1
Italy	0.0	0.3	0.0	0.0	0.0	0.0
U. S. A.	4.5	1.9	1.6	1.5	0.9	1.6
Br. India	0.0	0.0	0.1	0.0	0.0	0.0
Australia	0.0	0.0	0.1	0.1	0.1	0.0
Canada	0.0	0.0	0.0	0.1	0.0	0.0
Dutch East Indies	0.0	1.6	0.1	0.1	0.1	0.1
China	63.1	7.8	2.0	1.3	1.7	5.7
Hongkong	12.8	1.8	0.7	0.7	0.2	0.0
Manchoukuo	0.0	0.0	0.2	0.3	1.1	1.5
Kwantung	0.0	0.4	1.0	1.1	3.1	4.6
Japan	19.6	85.5	92.5	93.2	92.0	86.0
All others	0.0	0.2	1.2	1.0	0.4	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Imports

	1896-1900	1926-30	1936	1937	1938	1939
Great Britain	7.3	1.7	0.1	0.2	0.1	0.0
France	0.0	0.0	0.0	0.0	0.0	0.0
Germany	1.2	3.9	1.1	0.4	0.3	0.4
Italy	0.0	0.0	0.0	0.0	0.0	0.0
U. S. A.	5.3	1.8	1.0	0.9	0.7	0.4
Br. India	2.3	4.5	1.1	0.9	0.9	1.0
Australia	0.4	0.3	0.1	0.0	0.0	0.0
Canada	0.0	0.3	0.2	0.1	0.0	0.0
Dutch East Indies	0.2	1.3	0.6	1.0	0.6	1.1
China	37.4	13.8	2.9	1.9	0.5	1.0
Hongkong	3.0	0.0	0.0	0.0	0.0	0.0
Manchoukuo	0.0	0.0	6.7	5.4	4.9	5.4
Kwantung	0.0	1.3	2.4	2.2	2.2	2.5
Japan	27.0	68.3	83.4	86.3	89.4	87.6
All others	15.9	2.8	0.4	0.7	0.4	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0"

4:Grajdanzev--144-146 S-4 (no date) 1942 Formosans-1-3
116, 439, 656, 722, 177.43 Japan
636.43

"These tables [pages 143-144 in category 116--analyst] are of some value beyond the topic of immediate interest. Elaborate theories of international trade have been constructed, the purpose of which is to explain the movement of international trade as distinct from internal trade, but these theories pay little or no attention to factors of political control which are so often of paramount importance in this sphere. Before the occupation of Taiwan, Japan occupied a very modest [145] place in the trade of the island and even after the conquest, her share was at first small; in the period 1896-1900 imports from Japan made up on the average only 27 percent of the total and exports to Japan, only 19.6 percent. It is true that these figures are rather too low because of the absence of data on Japan's trade in 1896, but if these data were available, they would probably increase Japan's share by only 4 or 5 percent. The fact is that even after the occupation of the island, and in spite of the presence of large detachments of troops and swarms of Japanese officials and adventurers, trade continued for some time to flow chiefly in the old channels. However, this situation was soon changed. In 1926-1930 exports to Japan amounted to 85.5 percent of total exports and in 1937 reached a maximum of 93.2 percent, a figure probably unsurpassed in the history of other colonial countries. The same development was achieved in imports. In 1926-30 Japan's share was 68.3 percent, in 1931-35 it was 83.4, and in 1938 it reached a maximum of 89.4. The slight fall

in Japan's share in 1938 and 1939 is apparent rather than real, for in these years Kwantung, Manchoukuo, and maritime China became to all intents and purposes Japanese colonies and for the Japanese in Taiwan it makes no difference from the point of view of profits and foreign exchange whether they trade with Japan or with these regions. In 1939 the share of this 'yen bloc area' of Taiwan's trade was 97.8 percent of her exports and 96.5 percent of her imports. For comparison let us look at the share of China. In 1896-1900 her share in Taiwan exports averaged 63.1 percent, in 1926-30, only 7.0, in 1936, 2.0, and in 1937, 1.3. The same picture appears in the case of imports, for which the corresponding percentages are 37.4, 13.8, 2.9, and 1.9. China is near, --just across the Taiwan Strait, her population is vast her cities are growing, her products are held in high esteem by the Chinese population of the island, she is in great need of Taiwan's products, and yet the trade between these two regions continued to fall catastrophically. But in 1937-1938 the most important points on the Chinese coast were occupied by the Japanese. By 1939 the area under the latter's domination has increased further, and a surprising change is occurring [sic]--the trade of Taiwan with China now shows a remarkable increase.[146]In 1937 exports from Taiwan to China were valued at 5,575,000 yen, but by 1939 they had risen to 33,840,000. Imports from China in 1938 were valued at 1,954,000 yen, in 1939, at 4,253,000. Although China experienced war in the last three years, though many of her cities were ruined, and the purchasing power of the population has fallen, the trade is better than at the start of the conflict. The reason for this reversal

lies not in the economic situation; it is rooted in the change in the political conditions for now maritime China is virtually a Japanese colony.

This will help us to understand why the foreigners--British, Americans, and others--were gradually ousted from Taiwan. Before 1895 British and American trade with the island was larger than that of Japan, the most important branches of trade, as well as shipping, were in British hands. The British owned Douglas Co. monopolized shipping, the Hongkong and Shanghai Banking Corporation dominated the financial sphere, Jardine Matheson, Dent, and Samuel Samuel traded in camphor, sugar, tea, and other products, while the trade in rice was chiefly in the hands of Chinese. Mitsui Bussan--the pioneer Japanese firm--did not appear on the island till 1898. The share of Great Britain in Taiwan's imports fell from 7.3 percent in 1896-1900 to 0.1 in 1936 and to almost zero in 1939, while in the same period that of the United States fell in 1896-1900, 3,413,009 in 1929, and 1,750,000 in 1939. from 5.3 to 1 and to 0.4. [sic] In 1896-1900 Taiwan's average annual imports from Great Britain were valued at 1,326,000 yen, in 1926-30 (in depreciated yen) at 3,083,000 yen and in 1936, at 392,000. The imports from the U.S.A. amounted to 957,000 yen in 1896-1900, 3,413,009 in 1929, and 1,750,000 in 1939. (The purchasing power of the yen of 1939 is probably not more than one-fourth of what it was in 1896-1900.)"

"Independent trade and foreign business are at an end (1) and the handful of foreigners

1. Identical amounts of foreign trade may mean different things for a nation; thus if an American firm buys tea in Taiwan, transports it to the United States in an American ship and sells it to retailers, the net result for the United States is very different from the case where a Japanese firm buys tea in Taiwan, brings it to the United States in Japanese bottoms, and sells it to American retailers.

in Taiwan are in a precarious position. In his [147] book 'Taiwan under Imperialism' Tadao Yanaihara explains this in the following way (2): in their competition with foreign

2. Yanaihara, op. cit., pages 48-49.

and Chinese merchants the Japanese traders had great capital; they also entered the sphere of production; they had the advantage of the cooperation of the Taiwan Bank; they were helped by state monopolies; they enjoyed subsidies from the state; they were protected by the tariff wall. But nowhere in his book does Professor Yanaihara give proof that the Japanese merchants had greater amounts of capital when their enterprises were organized. The huge capital funds were not brought from Japan; they were created in Taiwan itself. Neither can any reason be found for combination of trade and production

as a cause of their success. According to his own statement (op. cit., page 48), the foreign traders and shipping were almost completely driven out (hotondo kuchiku serarete) by 1907. But at that time no Japanese took any part in the production of rice, whereas in tea production Mitsui Bussan Co. and Nozawa have participated only since 1907. As late as 1905 about 90% of the sugar was produced in primitive mills and only 4,535 tons in the mills of the newly-established Japanese enterprises, while the total exports of sugar for 1905 were but 42,600 tons. Pineapples and bananas were unimportant as articles of export in these early years: bananas appeared in the custom reports in 1907 (valued at only 44,129 yen), pineapples to the value of only 18,639 yen were exported in the same year. Since camphor became a monopoly, there is no question of competition with respect to it; while alcohol was practically not exported."

4:Grajdanzev--148-149 S-4 (no date) 1942 Formosans-1-3
116, 439

"Exports By Commodities, (1,000 Yen)

	1900-4 average	1925-29 average	1936	1937	1938	1939
Rice	3,975	67,157	124,318	126,193	128,784	128,502
Sugar	3,234	117,562	166,116	191,546	189,258	259,827
Bananas		9,310	11,166	12,335	13,283	17,006
Tea	5,691	11,035	10,270	12,852	12,742	12,424
Canned Pineapples		2,785	7,244	9,220	10,412	13,342
Camphor, crude	2,912	4,036	5,333	4,476	4,066	6,010
Camphor oil	1,112	2,509	853[a]	1,063[a]	3,152	4,030
Alcohol		5,806	5,841	5,765	9,773	16,528
Fresh fish		1,303	3,277	3,268	2,233	3,719
Salt	91	985	1,103[a]	1,096[a]	2,259	1,252
Cotton tissues	23	4,010				
Hats, caps	21	2,969	2,453	3,270	2,989	4,829
Coal	25	7,098	2,254	3,932	7,986	9,167
Ores		1,943	15,637		unreported	
Timber			2,075	2,137	3,257	5,106
All others	1,932	17,817	30,009	63,022	66,460	102,197
Total exports	19,016	256,325	387,949	440,175	456,654	592,939

a) Exports to Japan only, other data could not be obtained.

		Exports As Percentages Of Total				
Rice	20.9	26.2	32.1	28.7	28.2	21.7
Sugar	17.0	45.7	42.9	43.5	41.4	43.8
Bananas		3.6	2.9	2.8	2.9	2.9
Tea	30.0	4.3	2.6	2.9	2.8	3.6
Canned pineapples		1.1	1.9	2.1	2.3	2.3
Camphor, crude	15.3	1.6	1.4	1.0	0.9	1.0
Camphor oil	3.9	1.0	0.2[a]	1.3	2.1	2.8
Alcohol		2.3	1.5	0.2[a]	0.7	0.7
Fresh fish		0.5	0.8	0.7	0.5	0.6
Salt	0.5	0.4	0.3[a]	0.3[a]	0.5	0.2
Cotton tissues	0.1	1.6				
Hats, caps	0.1	1.2	0.6	0.8	0.7	0.8
Coal	0.1	2.8	0.6	0.9	1.7	1.6
Ores		0.8	4.0			
Timber			0.5	0.5	0.7	0.8
All other	10.2	6.9	7.7	14.3	14.6	17.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

a) Exports to Japan only, other data could not be obtained.

1. Source: for 1903-1929, Takahashi, op. cit.; for 1937, An Inquiry into the National Income of Japan (Economic Federation of Japan, Tokyo, 1940).

4:Grajdanzev--149 [21 S-4 (no date) 1942 Formosans
116; 433, 439, 177.24 Japan
636.24

"In 1939 about 81 percent of Taiwan's exports consisted of agricultural raw materials and products manufactured from them such as sugar, tea, and tobacco. In fact the island is practically an agricultural appendage of the Japanese economy."

4:Grajdanzev--149-150 S-4 (no date) 1942 Formosans-1-2
116, 171, 435, 439, 177.43 Japan
636.43

"Two other aspects of Taiwan's exports should receive our attention. First, it is interesting to compare the gross value of Taiwan's production with its exports, keeping in mind that the gross value is considerably larger than its net value, i.e. by the cost of materials, fuel used in production, etc.

Comparison of the Gross Value of Production and Exports

	1903	1922	1929	1937
Gross value of production, million yen	84.5	354.2	598.6	890.5
Exports, million yen	20.7	158.4	272.0	440.2
Exports as percent of gross value	24.5	44.7	46.3	49.4

From this table it appears that in 1903 about one-fourth of the gross value was exported, while in 1937 the amount had risen to 49.4 percent. This probably means that in 1937 not less than three-fourths of the total net value of production of production[sic]of Taiwan was exported. Such a high ratio of exports to gross value of production is probably approached only [150] by Korea (1).

1. If Taiwan were to receive the equivalent in imports, the large exports would not constitute a problem. But we shall see later that this is not the case.

To see how far this situation was to the mutual advantage of the natives and the

Japanese, one should compare not only the ratio of exports to total production but also the absolute amounts which are not exported. In 1903 there remained 63.8 million yen worth of unexported goods, while in 1937 450.3 million were left. Let us now examine these figures in the light of price-changes: We have no index of prices for Taiwan in 1903, but we do have prices of rice--the most important product of the island--to which the authorities in 1937 gave a weight of 31 percent in the general index (2). A picul of

2. Actually it should be about 40 percent because the authorities gave sugar a weight of 25.3 percent, unduly large in view of the fact that more than 90 percent of the production is exported.

rice in 1903 cost 2.36 yen; in 1937, it cost 9.32 yen, or almost 4 times as much. If we also take into consideration the growth of population, the residual per capita gross production 'in rice prices' was 21.8 yen in 1903 and 19.8 yen in 1937. These are gross values of production, and since industry played a much greater part in 1937 than in 1903, the per capita net 'real' values in 1937 must actually be much smaller than in 1903. This is a startling conclusion. We emphasize again that these figures can only be approximate, yet they are sufficient to indicate the trend of events."

From the above table it is apparent that first place in Tai-[149]wan's exports is occupied by sugar, its value in 1939 being 260 million yen. Second place is taken by rice, the exports of which increased from 4 million yen in 1900-4 to 129 million in 1939, and next in order of importance, though far behind come tea, bananas, alcohol, pine-apples, and camphor. In 1900-4 the island exported chiefly tea and camphor, and these two products alone made up more than half the total exports."

4:Grajdanzev--149 S-4 (no date) 1942 Formosans
116, 314, 439, 655, 177.31 Japan
636.31

"The government, desiring to utilize the unique position occupied by Taiwan in the supply of camphor, made it a government monopoly. However, in the last few years synthethic camphor production has made striking progress and the monopoly is now definitely broken. This does not mean that natural camphor will lose its market for the expanding celluloid industry can successfully absorb the surplus, but the former advantageous position of the Japanese government is lost."

4:Grajdanzev--150-151 S-4 (no date) 1942 Formosans-1-2
116, 439

"The other matter of great importance is the sharp increase of exports from Taiwan since the start of the present Sino-Japanese war, without a corresponding rise in imports. In 1937 the increase of exports over 1936 (a year of peace) was 52 million yen, in 1938, 68 million, in 1939, 205 million, while imports increased by only 116 million yen between 1936 and 1939. To such a degree were Taiwan's reserves depleted that in spite of the great rise in prices the external trade shows a fall of 7 million yen for the first five months of 1940 as compared with the first five months of 1939. A brief analysis of Taiwan's imports follows. [151]

Imports by Commodity Groups (1,000 Yen) (1)

1. Source: Keizai Nenkan of the Oriental Economist, based on the data of Taiwan boeki geppo.

	1900-4	1925-29	1936	1937	1938	1939
Cereals, starches seeds	1,615	22,939	14,655	15,341	17,168	21,239
Foods and beverages, tobacco	3,788	33,249	45,031	15,341 47,001	17,168 54,214	21,231 66,679
Oils, fats and mfrs. thereof	1,276	7,490	13,877	17,623	19,386	20,593
Chemicals, drugs, dyes, explosives	3,203	9,530	15,586	17,643	18,980	28,096

116. 439

	1900-4	1925-29	1936	1937	1938	1939
Threads, cords	215	3,930	4,568	4,850	4,648	5,214
Tissues, clothing and other textiles	3,175	29,528	38,417	40,888	52,303	48,566
Pulp, paper, books	841	5,257	7,937	9,015	10,008	11,860
Mineral and mfrs. thereof (cement, tiles, sand, etc.)	339	2,536	7,054	9,344	9,075	10,723
Ceramics	333	2,571	3,830	4,097	4,182	5,074
Ores, metals and mfrs.	1,126	15,711	33,553	43,853	48,721	45,909
Vehicles, machinery, arms, precision and scientific instruments	667	10,222	28,319	26,013	29,236	40,478
All others	4,924	47,196	79,859	86,456	98,738	104,227
Total	21,502	190,159	292,686	322,124	366,659	408,650"

"In return for exports to the value of 593 million yen in 1939 Taiwan received only 409 million yen worth of imports (69 percent). In order to move these exports to Japan certain conditions are obviously necessary. Taiwan must import rails, railway equipment, harbor equipment, bags for rice and sugar, fertilizers, etc. Taiwan's exports--rice, bananas, sugar, tea, pineapples, fresh fish, etc. --are foodstuffs. But most of the imports enumerated are of no direct use to the islanders themselves; they are beneficial only insofar as they help them to secure other goods. They are really costs of production. In 1939 at least 60.7 million yen worth of fertilizers, including bean cakes and other cakes, (included in 'all others' in the table above) and about 8 million yen worth of gunny sacks were imported. Another group of imports is connected with the effort to turn the island into a powerful base for further advances into China [152] and the Southern countries. Port facilities far beyond the needs of Taiwan itself, powerful radio stations, fortresses, strategic railways, factories producing war materials are being built. Again we cannot determine exactly how great this group of imports is, though we can guess its growth by following the growth of 'ores, metals and manufactures thereof', etc. These two groups, which in themselves contribute little to the welfare of the islanders, increased from 28 million yen in 1925-1929 to 62 million in 1936, to 70 million in 1937, to 78 million in 1938 and to 86 million in 1939. To some extent this growth is purely illusory since it reflects the rise in prices in these years, but we know that in the Japanese colonies, just as in Japan, the consumption of metals, machines, for peace time uses,

etc., was reduced or stopped completely, so that the greater part is now available for military purposes."

"The remaining imports —— imports for consumption —— should be divided, wherever possible, into two parts —— consumption by Japanese and consumption by Chinese. Without attempting any detailed analysis we may make a few remarks on the basis of the material available. In 1939, for example, 2 million yen worth of condensed milk was imported, as well as 7 million yen worth of sake and 5 million yen worth of beer, not including local production of sake and beer. Neither sake nor beer are Chinese drinks; they are consumed chiefly by 100,000 Japanese male adults and by the troops stationed there. To take another example, in 1939 48.6 million yen worth of fabrics and clothing, including shoes, hats, gloves, buttons, pearls, combs, bracelets, laces, etc. were imported into Taiwan. From this amount 8.1 million yen worth of gunny sacks should be deducted, leaving a balance of 40.1 million. If Japanese residents were able in 1939 to spend 12 million yen on drinks (not including locally produced and consumed beverages), they probably spent not less than double this sum on clothing, shoes and other personal articles (1) which—with a [153] few unimportant exceptions—are imported from Japan.

1. That this is not an overestimate may be judged from the following figures: 77.2 yen per person per year or about 25 yen per family per month can hardly be considered as excessive for clothing (including shoes, etc.) in a country where, for example, one yard of muslin cost 1.34 yen. In a special investigation conducted in 1937-1938, which covered 355 Japanese families with 1,397 members, the average

monthly income of a family was 184.6 yen, of which 23.6 yen was spent on food, 16.9 yen on lodging, leaving an ample margin for clothing and other expenditures. (Data on budgets from the Toyo keizai tokei geppo, July, 1940). An investigation conducted in Japan proper in 1936-1937, only one year earlier than the investigation in Taiwan mentioned above, gives the average expenditure on clothing of 10.18 yen per month for persons with an average salary of 88.37 yen; for the low income brackets it was 3.43 yen, for higher (about 100 yen), 12.18 yen. In our case the average salary is 184.6 yen, so that an expenditure of 25 yen on clothing is quite probable. See Kakei chosa hokoku, (Naikaku tokei kyoku) Tokyo, March, 1938.

If this is true , then not more than 3 yen per capita were spent on imported clothing by the Chinese in 1939 (2). But, as was pointed out in the preceding pages, the Chinese

2. The correctness of our estimate is supported by the budget estimates made by the government officials in 1936 and quoted by Nasu (op. cit.). According to them, the per capita annual expenditure on clothing of a representative Taiwanese farmer was 6.02 yen in 1936. This figure includes imported and locally produced clothing (shoes, hats, etc.) whereas our estimate is for the imported textiles only.

society in Taiwan is not uniform. Its wealthier members spend on clothing many times more than the small farmers, workers, or tenants."

6: Kirchhoff--33 [7] U-4 (no date) 1895 Formosans
116, 439, 489

When four ports were thrown open in 1860 to foreign commerce (Tam-sui and Ki-lung in the northeast, Tai-nan and Ta-kaô in the southwest), in Europe excessive hopes were set on the commercial profits to be obtained from the natural wealth of the island. Nothing was known of the lack of communications in the interior, the utter absence of the canals which, in China, did so much to render easier the transport of goods, or of the poverty of the inhabitants. The sum at the disposal per day of the poor Chinese peasant for himself and his numerous family (the Chinese price of essentials being very low) is but 20 pfennigs! But since then many advances have been made in Formosa, and at least in some stretches the absence of roads has been made good. How much that has fostered commerce can be seen from the increase of total imports and exports for the two most important of these treaty ports. In the 15 years from 1868 to 1883, these figures rose from 7 to 18 million for Ta-kaô, and for Tam-sui from 5.6 million to 20 million.

6: Kirchhoff--33-34 U-4 (no date) 1895 Formosans
116, 252, 439

The main imports from lands other than China are cotton and woolen materials, and Indian opium; then follow metal goods, clocks, maize flour (used by Chinese settlers in baking cakes), boards, lamps, matches, dye for dyeing, umbrellas, needles and related articles. Even more variegated is the list of imports from China, embracing hemp sacks, peas, bricks and fans, jade bracelets, etc., but the value of this commerce which involves for the most part the ports of Amoy, Tsuan-tschau (Tschang-tschou on our maps) and Fu-tschau cannot be estimated. *

*The Europeans acting as customs officials in the treaty ports [34] note only the value of the goods imported from abroad and exported abroad, because they have to collect taxes for the Chinese Government from them alone. Consequently it is obvious that the value of goods from China and exported to China is not included in the sums quoted for Ta-kaô and Tam-sui.

6: Kirchhoff--34 U-4 (no date) 1895 Formosans
116, 439

The bulk of Formosan exports consists of sugar, coal from Ki-lung, tea, camphor, nettle fiber, indigo and wood for construction. Sugar constitutes roughly half of the total exports, indeed almost the total exports of the southwestern harbors, where the only other exports concerned, practically speaking, are sesame and turmeric root (for the manufacture of saffron yellow). The inferior brown kinds of Formosan sugar go to Japan and China, the white sugar is exported to Europe also.

6: Kirchhoff--34 [2] U-4 (no date) 1895 Formosans
116, 372, 439

The coal from Ki-lung might bring in tremendous sums, in view of the steadily growing demand for coal in the South Seas steamer traffic, which at present must be met by coal coming from such distant parts. And, in fact, in Hongkong for example Formosan coal can be delivered at a price per ton of 20. 2 marks, so that it is at times cheaper than Japanese and Australian coal, and almost only half the price of English coal. But unfortunately this coal is too bituminous, and therefore burns too quickly, emits a great deal of smoke and deposits much soot in the chimneys. So the Chinese of the mainland prefer their own anthracite, while the foreigners in the Chinese coastal regions are quite willing to burn Formosan coal in stoves in the rooms. In view of the cheapness of the latter, its future seems assured, particularly when it is mixed with slower burning coal that is free of bitumen.

6: Kirchhoff--34 [4] U-4 (no date) 1895 Formosans
116, 439

It must still be stressed that China and Japan naturally occupy first place in the export trade with Formosa, because of their proximity and huge populations, but that the European flags most often seen are the English and the German. . Formosan tea is sent almost exclusively to North America, and the camphor is sent via Hongkong to Europe (the yearly value often amounts to 600,000 marks).

7: Joest--55 [11] E-5 (no date) 1882 Formosans
116, 439

The total imports in the two harbors of Tamsui and Taiwanfu-Takao in 1880 were approximately 20 million Mark, and the total of exports was 30 million Mark, that is, 50 million Mark together. The chief articles of import are opium and Chinese articles of consumption such as European shirting, iron, bags, etc. The exports from the north consist chiefly of tea, camphor, and coal, and those from the south consist chiefly of sugar.

..7: Joest--55 [6] E-5 (no date) 1882 Formosans
116, 439

During the previous year [MS: 1881] about 12,000 Pikul of camphor, at a value of about 600,000 Mark, were exported from Formosa.

9: Yamasaki--232 N-5 (1896-1897) 1900 Formosans
116, 249, 439

The second chief product is sugar-cane. It is noteworthy that sugar-cane in Taiwan is much smaller than in the Riukiu Islands. It grows in large quantities in the plain of Tainan. November is the harvest month. The raw sugar is manufactured with the help of a primitive mill in large, cone-shaped huts, of which many can be seen in the southern plain. The most important centers of the export trade in sugar-cane are Takao and Tainan (Anping), the trade being very lively between January and April.

9: Yamasaki--232 [3] N-5 (1896-1897) 1900 Formosans
116, 245, 439

Taitōtei is the only town manufacturing and dealing in tea. The tea is exported via Tamsui to Amoy, and from there the Oolong tea goes in the main to America, in part to England also, and the Pauchong tea goes to the Straits Settlements for the Chinese who live there.

9: Yamasaki--234 [3] N-5 (1896-1897) 1900 Formosans
116, 439, 652

The total national income (Erträge) of Taiwan is estimated at over 40,000,000 yen per year. Of this, the total value of goods exported in 1896 amounted to 11,791,051 yen.

42: Schetelig--386-387 T-2 (no date) 1868 Formosans
116, 135, 177, 361, 439

Kilung is a Chinese town with walls and gates. It is open to European commerce and is distinguished for the by no means inconsiderable beds of coal in the neighborhood and by the traces of a Spanish fort. For as, in the south near Taiwan-fu and in the north near Tamsui, quite substantial remains of Dutch strongholds are to be found, similarly the Spaniards, [387] during their brief period of settlement in the 17th century, seem to have made Kilung the chief point for their operations.

VIII. IMPORTANT CITIES[3]

Keelung

439 Keelung City, the port for Taipei and northern Formosa, handles nearly one-half of Formosa's imports and a little more than one-fourth of all exports. Apart from factories which manufacture commercial fertilizers, wheat flour, and bicycles, it has ship-building facilities, a railway terminus, and warehouses. It also is a base for deep-sea and coastal fishing. The registered population in June 1953 was 170,000.[4]

Taipei

438 633 Taipei, located on the northern bank of Tan-shui River, is the largest city on the island, with an estimated population of over 700,000 in early 1956. It is the capital of

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3. Information on the important cities is taken from A.F. Raper and others, Urban and Industrial Taiwan, Taipei, Foreign Operations Administration and National Taiwan University, 1954, pp. 73-109.

4. The registered civilian population, apparently not including military personnel and foreigners.

Kaohsiung

504 712 Kaohsiung is the second largest city and is known for its harbor and large-scale industries. It has a population of 300,000. [439] Because of its warm and rather dry climate, this port handles a major portion of the island's sugar, salt, and cement exports. The naval base of Tsoying is located in the city and the military fort, Fengshan, another important military base, is about six miles north of the city limits.

Makung

712 633 Makung, located in the west of the main island of the Pescadores, is an important naval base and the seat of the Penghu hsien government. The fact that this port lies in the Formosa Strait and between the China Mainland and Taiwan gives it strategic importance.

occupation in the first half of the seventeenth century, rice and sugar have been the staple products of the island.

Under Chinese rule in the eighteenth and nineteenth centuries, a constant influx of immigrants from the mainland reclaimed the extensive western plains of Formosa for the cultivation of rice and sugar. The foothills surrounding the plains were terraced for the growing of tea. Further in the mountains, camphor was gathered from the dense forests. In the more isolated mountain region, aboriginal tribes practiced hunting and slash-and-burn agriculture. Coal mines were operated for a time by the government but were later abandoned.

Except for a 60-mile stretch of railway between Keelung and Hsinchu, communications was primitive until the present century. Rafts, boats, and junks were used along the coast and on lakes and rivers. Overland, the inhabitants were obliged to travel either in man-borne palanquins[3] or ox-drawn carts. Western merchants handled a small international trade, consisting of tea, camphor, and sugar.

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3. A closed litter commonly used as a conveyance in China.

45:Stanford U. S-4, 5 1956 AD1 Formosa
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648 Under the Japanese from 1895 to 1945, the economy of Formosa was geared entirely to that of the colonial power. The island was developed as a major source of foodstuffs to feed the rapidly growing population of Japan. All possible arable land was brought under cultivation. The production of rice [439] more than doubled between 1905 and 1935; the sugar crop tripled between 1910 and 1940.[4] Great strides were made in modernizing communications and transportation throughout the island, including the construction of a network of railways and roads. After 1937, 648 178 439 some effort was directed toward the industrialization of the island. Factories were built, electric power developed, highways and railways improved, and harbors enlarged. A number of large plants were established to use the raw materials of Southeast Asia in the production of semi-finished goods to supply Japanese industry. The chief emphasis was on metals and chemicals. No attempt was made to achieve industrial self-sufficiency on the island. Fertilizer and textiles, two of the most important industrial products in an agrarian economy were totally neglected.

4. Norton S. Ginsburg, Economic Resources and Development of Formosa, New York, Institute of Pacific Relations, 1953, p. 24.

[727] Economic dependency on Japan was accentuated 648 by the employment of only Japanese in both 459 technical and managerial positions. From the beginning of the Japanese control, trade was confined almost exclusively to territories within the Japanese empire and managed for the most part by Japanese personnel. Japan took between 90 and 95 per cent of Formosa's exports and supplied 85 to 90 per cent of the island's imports. Some sugar and coal were shipped to China, and small quantities of tea and camphor were sent to the United States. 648 Banking and currency were linked to the 454 Japanese system, and all capital investment was controlled by the Japanese.[5] "Every year, for at least fifteen years previous to the war, Japan is believed to have gained directly 150 million yen from her investments in Taiwan, and for the fifteen years before that lesser but still significant sums".[6]

648 Some of the Japanese industrial projects 727 were never completed. Others wer destroyed

5. By 1939, 90% of all the capital invested in the island was held either by the Japanese government or Japanese nationals; the remaining 10% held by Formosans was mostly invested in small shops. Taiwan, A Geographical Appreciation, Ottawa, Department of Mines and Technical Surveys, Government of Canaca, 1952, p. 16.

6. Ginsburg, op. cit., p. 25.

[162]

241 The importance of agriculture to the national
434 economy is made more obvious by the fact that a large percentage of Formosan industries involve the processing and transporting of agricultural commodities. Agriculture products also provide an important source of foreign exchange for the island. In 1953, total
• [439] exports amounted to approximately US$130,000,000, of which over 90 per cent was derived from the export of agricultural products.

241 The climate in Formosa is eminently suitable for agricultural production. The tropical and sub-tropical atmosphere and abundant rainfall in most parts of the island encourage the cultivation of rice, sweet potatoes, sugar cane, tea, bananas, and vegetables. Rice cultivation is carried on in all parts of the island; sugar cane, sweet potatoes, and peanut are grown in the central and southern sections; tea is cultivated in the northern districts.

648 During the Japanese occupation of
241/ Formosa, the policy of economic development was geared to the economic needs of the Japanese Empire. When a shortage of rice was felt in Japan, rice was produced in

379 Formosa has not yet exploited the hydroelectric potential offered by its heavy annual rainfall and the steepness of its river gradients, and no sustained effort has been made to compensate for the varying water reserves available at different times of year, headwater erosion, the narrow valleys in which the rivers flow, and the silt and gravel which combined to reduce the efficiency of the streams as a source of power. For these reasons, the economic development of potential power sites is as important to Formosa as the implementation of flood control and irrigation programs.

Currently, the Taiwan Power Company has established a committee to investigate and plan the generation of power by atomic energy on Formosa.

IV. FOOD PROCESSING INDUSTRIES

A. The Production of Sugar

249 433 431 The history of the sugar industry in Formosa goes back to 1349, when islanders "boiled sea water to make salt and fermented molasses to produce liquor." [17] In 1650, when the Dutch were occupying Formosa, some 6,000 metric tons of sugar cane were produced each year. Of this amount, two-thirds were exported to Japan and marketed in lands as far away as Persia. Under the rule of Cheng Ch'eng-kung (Koxinga), who

17. China News Press, T'ai-wan Ching-chi Nien-pao, 1953 [Annual of Taiwan's Economy, 1953], Taipei, 1953, p. 45.

249 defeated the Dutch, annual production rose to
433 18,000 metric tons, a large part of which was ex-
439 ported to the Philippines and to Japan. In 1870, total production amounted to 73,000 metric tons; 63,7000 metric tons were exported. During the Japanese occupation of Formosa, the island's sugar industry was developed to supply the require-
257 ments of Japan proper. Four Japanese companies
433 controlled Formosa' sugar industry. During the
471 1930's, 42 mills able to process a total of 65,000 metric tons of sugar cane were in operation. The sugar syndicate owned 117 hectares of land, a railway extending 2,800 kilometers, had a staff of 5,000, employed 19,000 workers, and generated its own power. After the war, all of the mills came under the control of the government-owned Taiwan Sugar Corporation. In 1947, six mills were incorporated, bringing the total number of mills in operation to 36. At present, only 26 mills are in operation; for reasons of economy, ten mills were shut in the period 1951-52, and production goals for 1954-55 were lowered.

472 In addition to the Taiwan Sugar Corporation,
252 which is the sole producer of refined sugar, some 52 private companies belonging to the Taiwan Brown Sugar Association produce brown sugar for domestic use and foreign export.

257 The milling capacity of the 26 mills controlled
433 by the Taiwan Sugar Corporation is 49,350 metric tons of sugar cane per day; sugar recovery is about 12 per cent. These mills operate an average of 150

387 raw materials necessary for the processing of
433 fertilizer are available on Formosa. The island has a relative abundance of limestone, coke, coal, pyrite, and serpentine; phosphate must be imported. However, the present expansion program will only provide two-thirds of the minimum fertilizer
387 requirement of the island. The following table
433 compares the production and importation of chemi-
439 cal fertilizers.

PRODUCTION AND IMPORT OF CHEMICAL FERTILIZERS */

	Production	Importation
1937	31	413
1938	27	444
1939	34	356
1951	112	235
1952	150	403
1953	166	253
1954	168	359

*/ Industry of Free China, Vol. 2, November 1954, pp. 90-91, and Vol. 3, May 1955, pp. 56,70.

651 charge upon all non-exempt import cargo. The proceeds of this tax are forwarded to the provincial treasury. Articles imported for military use, for relief, or for educational or research purposes are exempted from import duty. And customs duties are not levied on the personal effects and supplies imported for use by diplomatic officials and personnel of the administrative agencies of American aid and military missions to Formosa.

The collection of customs duty is the single largest source of income for the central government. In 1954, customs duties amounted to NT $611,022,015[2] There are two customs districts in Formosa - Taipei and Tainan. Sungshan airport is under the administration of the Taipei customs district.

687 Because of the government control on
1/3 foreign trade, which forbids the importation of luxury items, smuggling is rampant. In 1954, fines amounting to NT$4,683,485 were collected.

651 The salt tax was once the most important tax on the China Mainland. In Formosa,

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2. The official exchange of Formosa currency in 1954 was NT$18.78 to US$1 and the market rate averaged NT$27.50 to US$1.

443 established stores and shops, provided one has skill in bargaining. Some operators at times manage to sell their items at high prices to unsuspecting customers.

II. FOREIGN TRADE

439 459 Foreign trade has had a stimulating effect upon the economic life of Formosa. The island must export its surplus products to afford the necessary imports of materials vital to its industrial and consumption needs. Businessmen are particularly concerned about the timely arrival of goods from foreign exchange. A great part of a businessman's profit or loss is predicated on his ability to anticipate and take advantage of government changes in the rate of foreign exchange and trade control measures. To operate successfully in Formosan society, a foreign trader must not only have experience and intuition concerning the right time and place to buy and sell, but also must possess initiative, shrewdness, and influence.

Formosa's principal exports include such items as tea, salt, sugar, rice, canned pineapple, bananas, coal, and camphor. Formosa is dependent upon foreign countries for such articles as precision machinery, motor vehicles, raw cotton, gypsum, crude oil, chemical fertilizers, bauxite, wheat, dairy

products, modern medicines, and soybeans. If export commodities are not sold overseas, the prices of these articles at home may be adversely affected; delay in the arrival of, or restrictions on, imported commodities may cause prices in Formosa to rise; and price changes of import and export commodities may cause a sharp increase in the prices of domestic goods. Shrewd manipulators take advantage of these market conditions to increase their profits. For the economy of Formosa to function and prosper, a stable and efficient system of import and export is imperative.

A. General Position of Trade

In terms of volume, the recent history of Formosa's foreign trade is characterized by a rapid expansion during the two decades preceding 1940, a sudden drop immediately after World War II and a gradual increase since 1945. In prewar years, a constant positive trade balance had accumulated; the postwar years have produced a persistent trade deficit, which in large has been met by aid from the United States.

Japan, the United States, Hong Kong, and Britain have been the most important trade partners of Formosa in the postwar years:

45:Stanford U. S-4, 5 1956 AD1 Formosa
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Formosan Trade, 1953*
(per cent)

Country	Export to	Import from
Japan	45.55	30.63
United States	4.18	38.67
Hong Kong	8.19	5.74
Britain	6.67	4.11
Egypt	3.46	1.61
Netherlands	3.05	3.11
Straits Settlements and Federated Malay States	7.89	1.57
Arabia	2.24	2.57
Other countries	18.72	11.99
Total	100.00	100.00

* The Inspector-General of Customs, The Trade of China, 1953, Taipei, 1954, Chart 4.

Currently, annual trade amounts to about 300 million American dollars whereas the annual trade in the years 1935-37 was about 200 million dollars.[5] When adjusted to prewar

5. Ministry of Economic Affairs, Republic of China; Navy Department, Civil Affairs Handbook, Taiwan - Economic Supplement, Washington, D.C., 1944, p. 72.

45:Stanford U. S-4, 5 1956 AD1 Formosa
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prices, current trade is still below the prewar level. Many reasons account for this change, but in the main it is caused by a transfer in the management of the island's economy. The Japanese exploited Formosa as a colony, and thus there was a constant flow of goods from the island, creating a trade surplus. The favorable trade balance was based on Formosa's position as an agricultural colony of Japan. The present administration, with aid extended by the United States, is endeavoring to build an independent and self-sufficient economy for the welfare of the people on the island. The recent announcement of Hsu Po-yüan, Minister of Finance, that the island will launch its second Four-Year Economic Plan in 1957 indicates an intention to continue present policy. This, in effect, means that the government will attempt to minimize foreign expenditures and increase foreign earnings while efforts are made to balance domestic production and consumption. As far as foreign trade is concerned, this in no way means the reduction of Formosa's dependence on the outside world. To continue the development of its textile industry, the island still requires imported raw material amounting to over US$20,000,000 annually. The swiftly expanding fertilizer industry depends on the import of phosphate, and the flour industry relies heavily on the import of wheat. The same applies to the petroleum refining industry, which would

probably have to cease operation if the import of crude oil stopped. However, it is clear that the import of raw materials instead of manufactured goods will tend to decrease the total value of import expenditure. To a certain extent, world market conditions and production costs in Formosa also account for the low rate of trade in recent years.

The most important exports of the island have been sugar and rice. In 1954, sugar export accounted for 60 per cent of the total foreign exchange, and rice for about 8 per cent. Tea export was third in volume before 1954; in 1954 it accounted for nearly 10 per cent of the total export. Next in importance are bananas, salt, canned pineapple, coal, and citronella oil, each accounting for from one to five per cent of the total exports in various years.[6]

Import commodities in 1954 were listed by the ministry of economic affairs in the following order of value: machinery and tools, metals and metal products, chemical fertilizers, raw cotton, wheat and flour, and soyabeans, each valued at from US$14,000,000 to US$25,000,000; crude oil and gasoline, medicines,

6. Ibid.

ships, motor vehicles and parts, wool and artificial fabrics, fat and wax, chemicals, and salted and dried fish, each valued from US$3,000,000 to US$11,000,000. In recent years, imports of investment goods and industrial raw materials have been increased, while consumer items have been greatly decreased.[7]

Increased activities in industrialization and an expanding population in the last seven years have necessitated a rising volume of imports; exports have failed to keep pace. The following table presents a picture of the situation:

7. Ibid.

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FORMOSA -- TOTAL IMPORT AND EXPORT* (In millions of U.S. dollars)

	Total export	Total import#	Trade deficit
1950	93.1	110.1	17.0
1951	93.1	143.3	50.2
1952	119.5	207.0	71.9
1953	129.8	190.6	60.8
1954	97.8	203.7	105.9
1955	130.0[x]	-[y]	

* Ministry of Economic Affairs, Formosa.

\# Including commercial import, U.S. aid import, and import through self-provided foreign exchange.

x From Asia Foundation Bulletin, January 20, 1956.

y Not available.

459 The government has established in the past
459 years a set of schemes for control of foreign exchange and trade flow to prevent the flight of capital abroad and reduce the trade deficit.[8]

B. Trade and Foreign Exchange Controls

The Foreign Exchange and Foreign Trade Screening Committee of the Executive Yuan is charged with the duties of determing foreign exchange and foreign trade measures and of examining the use of foreign exchange. The committee functions only as a screening and licensing unit; the Bank of Taiwan is the only organization on the island given authority to engage in foreign exchange business. All imports by public enterprises or private firms, with few exceptions, must be licensed,[9] and the issuance of an import license carries with it approval for the allocation of necessary

8. Trade deficit here is viewed from an overall economic standpoint. Frequent reports indicating a favorable trade balance only relate to commercial import as compared with export.

9. The exceptions are: imports by the International Co-operation Administration Mission to China, official supplies and personal effects of foreign consulates and diplomatic personnel, commercial samples, etc.

439
457 foreign exchange.

Before arranging for shipment of exportable goods, exporters must make a declaration of value in terms of foreign currency to the Bank of Taiwan. If the sales price is not at least equal to the floor price set by the bank, a separate appraisal by the customs is required. Exporters are required to surrender their export proceeds in foreign exchange to the Bank of Taiwan, receiving in return foreign exchange deposit certificates and New Taiwan dollars at the bank rate; the proportion between two methods of payment is determined by the bank. The deposit certificate are negotiable for ninety days after the date of issuance. Upon expiration, the certificate must be resold to the bank at an officially determined price. The current price[10] amounts to a total exchange rate of NT $24.66 per US $1, figured on the basis of an official exchange rate of NT $15.50 per US $1 plus a "certificate price" of NT $6 per US $1 and a defense tax equivalent amounting to 20 per cent of the existing exchange rate. However, nearly all exporters negotiate the certificates on the open market where a "certificate price" of NT $16-17 per US $1 raises the total exchange rate[11] of the

10. Regulations Governing Measures Pertaining to Sales and Purchase of Foreign Exchange, promulgated on October 22, 1955.

11. The Central Daily News, Nov. 28, 1955.

439 certificate to NT $34-35 per US $1. Certificates
459 bring high prices on the open market because importers must submit certificates in amounts equivalent to the foreign exchange alloted them by the licensing authorities. The supply of certificates is always less than the demand since there are more importers than exporters and because export-import traders often retain their own certificates against import requirements. If the exporter holds the certificate beyond ninety days, however, he suffers a loss amounting to the difference between the open market and official certificate price. An exporter cannot convert all his foreign exchange proceeds at the market rate since he receives only a part of them in certificates -- in the case of sugar, 80 per cent; and bananas, 50 per cent. On the portion of his foreign sales for which New Taiwan dollars are issued, the exporter sustains a loss amounting to the differences between the exchange rates.

Licensing of imports is carried out within an "import budgeting system," in which the authority announces an import budget once every two months covering imports for the following two months. Each budget specifies what commodities are to be imported and allocates to each commodity a specific amount of foreign exchange. An importer must be

439/459 duly registered with the government, and he is permitted to apply for permission to import only one kind of commodity during the budget period. Also, a maximum is set on the amount of foreign exchange any one importer may be allotted. The foreign exchange apportioned against any single commodity during a given period may be so small that when it is divided among a number of importers none is assured of a reasonable profit. Some importers sell their import licenses at prices ranging from NT $23,000 to NT $27,000, the cost of import[12] for the buyer of the license will be increased by an amount ranging from NT $11.50 to NT $13.50 per US $1. There exists an acute shortage of foreign exchange in spite of the fact that the government at times engages in the sale of foreign exchange deposit certificates in the open market. A private importer must pay NT $15.65 bank exchange rate at the Bank of Taiwan, plus 20 per cent as defense tax, and must submit the equivalent foreign exchange in deposit certificates. Government enterprises are not required to submit the certificates but must pay the official certificate price of NT$6 to US$1. Thus, the government enterprise is in a more

12. Ibid.

advantageous position than the private importer, who has to buy certificates in the amount he needs at current market rates. In effect, government enterprises pay NT $24.78 per US$1 for import and private importers pay NT $34-35 per US $1. The actual rate at which private importers pay for their exchange is thus largely affected by the current market price for the certificates and by the cost of fees that may be necessary to secure additional import licenses.

In summary, trade control is primarily effected by the requirement that exporters and importers to do business must be duly registered with the government, which may refuse to register an applicant In addition, export prices must be in line with the price determined by the Bank of Taiwan; import is restricted by the import budget. In foreign exchange control, the foreign exchange deposit certificate system is implemented by the partial relationship maintained between export and import and by the existence of multiple exchange rates. As well as the official rates for import and export, there exists a black market rate[13] for American

13. Tzu-yu Chung-kuo Pao [Free China Daily], San Francisco, Nov. 7, 1955.

notes -- about NT $38 per US$1. There also is a "preferential" rate of NT $34 per US$1 for cash or remittances surendered to the Bank of Taiwan by American personnel and by visiting overseas Chinese.[14]

14. Courtesy of Professor Li Ch'ao-ying of National Taiwan University.

matrix could easily have reduced death rates to 12 or 15 per 1,000 total population and, if birth rates had remained at 45, shot the rate of natural increase from 2.5 per cent per year to 3.0 per cent or more. 165 563

THE BIRTH RATE

Neither the extension of cultivation, the increase of yields nor the health and medical activities in Taiwan produced any major changes in the familial patterns of the peasants. The recorded birth rate of the Chinese remained above 40. There were some slight evidences of a lower birth rate in the more prosperous and urbanized provinces, but the social and occupational groups that might have adopted the modern individual and familial values, rather than the traditional Eastern values, were few in numbers. 163

The growth implicit in the maintenance of fertility at the level that existed in Taiwan during the last decade of Empire was indeed rapid. The gross reproduction rate for the entire population was over 3.2 and the net rate over 2.0.

It is obvious that no population dependent on agriculture and inhabiting a limited and already densely settled area could reproduce indefinitely at the rate implicit in these figures. Potential growth was more rapid than the actual growth of the thirties, though, for any social and economic changes that would improve levels of living and contribute ultimately toward a reduction in fertility would produce immediate and more rapid declines in the death rate.

THE PROSPECTS: PREWAR JAPANESE VIEW

The balance between the people and the land in prewar Taiwan may have appeared precarious to the Western student but the Japanese foresaw many decades of further expansion before the Malthusian pressures of the people on the food supply would limit either population growth or exportable surpluses. Rice production had increased from 2.1 million koku in 1900 to 4.9 million in 1923 and 9.7 million in 1940. In the latter year the export surplus amounted to five million koku. By 1950 rice production would amount to 12.8 million koku and the quantity available for export to Japan Proper would increase by almost a million koku. 433 241 439

The Japanese also realized that Asian hegemony implied a destiny beyond the agrarian for the once subject peoples and that Japan's own demographic

433 241 ●439 resources would have to be supplemented by the integration of Taiwanese and Koreans into the industrial nexus of Empire.

THE CONTEMPORARY PROSPECTS

178 727 Today the plans of the Japanese for the further development of Taiwan are somewhat irrelevant. The Chinese administration has penetrated every aspect of political, social and economic life. Initially the transfer of sovereignty resulted in sharp retrogressions. The great war industries were destroyed. The Japanese army departed, but Chinese soldiers from the Mainland now use the island for training to repel an invasion expected from the Mainland. The land is cultivated but the agricultural supervisors have been repatriated to Japan. In October, 1948, when we were in Taiwan, there were markets for surpluses that would yield funds to purchase the fertilizers essential to the maintenance of production. Disease and premature mortality were reported to be increasing. All this was descriptive, for statistics were a casualty of the liberation. Bureaucrats and university professors had been moved back to Japan and Japanese policy had produced totally inadequate numbers of Taiwanese to take their places.

177 198 The political travesty of the Chinese liberation of the Chinese population of Taiwan needs no recapitulation. It placed almost insuperable obstacles before even the most reasonable programs and the most capable administrators. Furthermore the Taiwanese were now a peculiar Chinese-Japanese cross-product and the cultural heritage of the half century of occupation complicates all aspects of Chinese-Taiwanese adaptations. The Taiwanese spoke Hakka or Fukienese, neither comprehensible to the other; the Mainland Chinese spoke Mandarin, which was incomprehensible to the Taiwanese who spoke either Hakka or Fukienese. So Japanese became the lingua franca between Chinese groups.

Had Taiwan been reintegrated into a functioning Republican China it seems probable that inundation from the Mainland would have reduced the Taiwanese to Chinese levels of living and absorbed their particular population problem into one of the greatest of all population problems, the demographic prospects of a modernizing and industrializing China. Today the future of the Taiwanese people is unpredictable. They are again pawns in a struggle for control of the East.

48: Chen E-4 (no date) 1955 AD1 Formosa AD1

corrected, the standardized death rate of the Japanese in Taiwan was 13.34 per 1,000, still far lower than the rate of 20.27 per 1,000 for their brothers in Japan proper[5]. The rate of infant mortality of the Japanese in Taiwan was also comparable to that of most advanced western countries. From this we can see that Japanese in Taiwan were under tremendously favorable circumstances. Their excessive benefits were enjoyed only at the expense of the land in which they lived.

Social change in Taiwan after the restoration in 1945 will help us to understand the character of colonial type of change. Under Japanese rule, manufacturing industry had attained a fair development, but it produced mostly processed agricultural goods or semi-manufactured goods, and finished consumer's goods were mostly imported from Japan. Fertilizer and textiles were two main import items. If the production of 1941 is taken as base, after the restoration, the production of textiles increased ten times and fertilizer increased five times by 1953 (7: p. 26). This is a sign that the economy of Taiwan has outstripped its colonial and dependent character and has become an autonomous system. In respect to education, the enrollment of Taiwanese school age children in primary school had attained 80% by the later years of Japanese occupation, but the secondary and higher education were very poor. After the restoration, if we take the figure of 1937 as a base and compare it with 1953, the growth of the number of students was as follows. Primary school: more than doubled; vocational and normal school: more than three times; middle school: six and an half times; college and junior college: more than eight times; university: more then twenty one times (7: p. 302). In order to rectify the defects of the colonial era, higher education was especially promoted.

The Japanese are no exception to the rule that each nation struggles for its own benefit. Now that the colonial era is at an end, it is our task to analyze the elements of social change in that era. Some useful references for planning of further social development may be drawn from our analysis.

III. SOCIAL CHANGE IN TAIWAN

Some aspects of social change which relate directly to population change, will be discussed in the following section.

7. Political Background

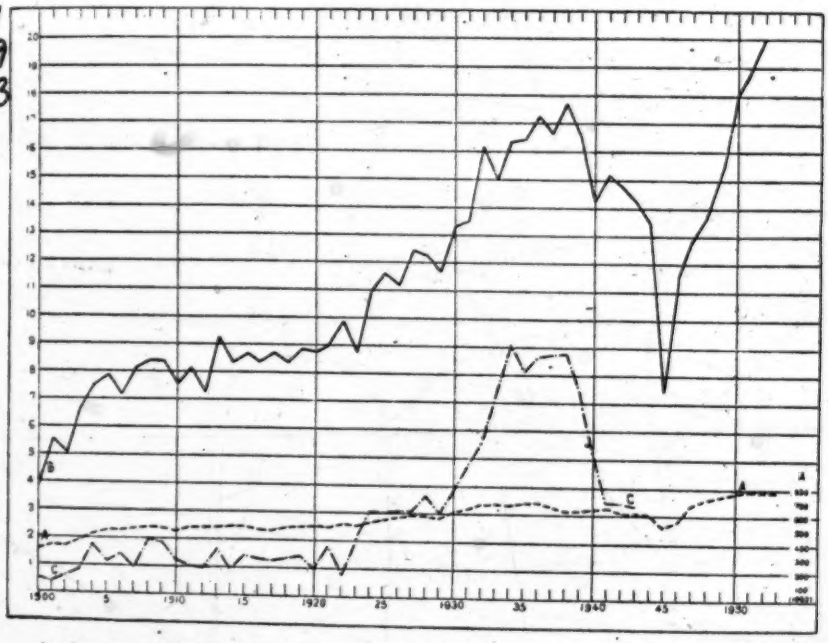
It is self-evident that population growth is deeply influenced by peace and war. The Japanese occupation of Taiwan in 1895 was met with a series of severe revolts. Between 1895 and 1901, the city of Taipei, the capital, was raided twice, the city of Taichung was also raided twice. Other military posts, local governmental offices and posts of military police were raided more than fifty times. A bigger uprising was suppressed in 1902, and after that several years passed in comparative tranquility. An insurrection broke out in 1907, and there were seven revolts between 1907 and 1915. During this period there were frequent uprisings against economic exploitation, as when

Note 5: Tachi, M.; Lecture on Population Problems, Tokio, 1943. p. 201.

48: Chen E-4 (no date) 1955 AD1 Formosa AD1

Productivity was raised by improvements in various aspects. The rapid increase in the output of rice from the 1920's was the result of the adoption of a new strain (Ponlai rice). By the 1930's, the production of rice in Taiwan was so large as to be twice its local demand, and the surplus rice was exported to Japan. Though the price of Taiwan rice was controlled by the Japanese government and the profit of trade in rice was mainly monopolized by big Japanese traders, the increase of production did have some benefits for Taiwanese, and no doubt, this contributed to the lowering of the death rate after 1920.

Fig. 6 Acreage of Cultivation, Amount of Production and Exportation of Rice, Taiwan, 1900-1953



A: Acreage of Cultivation (unit: 1,000 ha) B: Amount of Production (unit: 1,000,000 hectoliter)
C: Amount of Net Export (unit: 1,000,000 hectoliter)
Source, 1900-1948, from the Rice of Taiwan, 1949, Taipei.
1949-1952, from Taiwan Agricultural Yearbook, 1952, Taipei.

The condition of sugar was a little different from that of rice. The profit in sugar manufacturing was exclusively monopolized by the Japanese enterprisers. But it is undeniable that, in respect to the improvement of agricultural techniques and the raising of productivity, substantial effects were obtained.

As pointed out by W.S. Thompson, "underfeeding weakens the individual and renders him less resistant to disease, whether it be of the degenerative or of the germ

48: Cnen E-4 (no date) 1955 AD1 Formosa AD1

The use of commercial fertilizer spread quickly, and with textiles, became one of the main items of import from Japan.

For the improvement of hog raising, the colonial government had imported Berkshire hogs from Japan in 1896, and Yorkshire hogs from England in 1900. After a series of experiments, it was found that the first generation of hybrids between the native hog and Berkshire hog was most suitable to Taiwan, and the promotion of the hybrid was started in 1907. As in other agricultural practice, the traditional way of hog raising was a complicated procedure. Many religious and magical elements were involved in it, and it was not easy for the conservative farmer to adopt the profitable new hybrid. It took more than ten years of government promotion before people became willing to adopt the new hybrid. After 1920 more and more people adopted it, and the number of native hogs declined sharply (Fig. 10). This is the best instance of change in the attitude of the people. A new strain of rice (Ponlai rice) has been extensively cultivated since 1924, and the output of rice has sharply increased.

The 1920's is the turning point in the social history of Taiwan. Epidemics were wiped out, prevention of malaria had improved, the doctors of western medicine exceeded the doctors of the Chinese medicine, and even the cattle pest was wiped out. Political and social movements began for the first time. Primary education spread wider, the conservative farmer began to adopt new strains and new technics, and increase production. Mobility of the people had increased, more bicycles, automobiles, and trucks were used, and the level of living was raised somewhat. It was amid this social milieu that Taiwan's death rate steadily declined while its already teeming population with equal steadiness rose to new heights.

52:Barclay S-5 (no date)1954 AD1 Formosa AD1

discourage innovation in agricultural technique, and to keep at low levels the output per person working in agriculture. An economy in this condition requires important modifications when "economic development" is desired. Farming must be made more productive, and radical progress is necessary in other pursuits. Barring some curtailment of consumption, such a change always implies expanding production faster than what is immediately consumed.

One of the keys to the Japanese colonial program in Taiwan, and to its demographic consequences, was how they set out to induce this saving. They chose the course of concentrating the additions to income from production in a few corporate business structures, instead of relying on the savings of individuals in Taiwan. Presumably this has been a goal in the management of most colonies, since indigenous sources have rarely been relied upon for large-scale investments. Its corollary—policies to suppress gains in individual native incomes—has been the chief source of hostility against colonial powers. But while most other nations have had only moderate luck in pursuing this objective, with the Japanese it was an outstanding success.

They took care that the formation of capital proceeded rapidly and from internal savings alone. Even in Japan, which in some respects is closely comparable, the whole pattern and purpose were different. While the Japanese were leading their own economy toward self-sufficiency in manufactured commodities, economic change in Taiwan was being contrived with a still surer hand to move in an opposite direction, toward complementarity with Japan. The output of the island was gradually shaped so as to furnish a net contribution of agricultural and semi-processed food and related commodities every year to Japan. These were items which Japanese felt to be essential for their more ambitious plans at home, and which for various reasons they wished to avoid purchasing outside Japan in ordinary world markets.

All the while, they mounted an impressive program of building up physical equipment in the island itself. Thus earnings were being reinvested on a large scale at the same time that they were also being drained off at a considerable pace by exports to Japan. This feat had to be accomplished in only one way—by raising the output of the island sharply while not greatly changing the levels of consumption for the population at large.[2] In this respect the Japanese managed

[2] The alternative—of gains by depressing popular consumption—should probably be ruled out. It cannot be conclusively demonstrated either that levels of living rose or

52:Barclay S-5 (nodate)1954 AD1 Formosa AD1

the process of capital formation in Taiwan in basically the same way as at home, by prodding the economy at critical points with innovations and developing special social policies to divert the gains from consumption to investment. The success of domestic saving in Taiwan is simply accentuated by the steady flow of commodity shipments to Japan, whereby Taiwan as an enterprise did more than pay its own way.

This success is best summed up in the yearly figures of trade with the outside world. From 1909 on, with the sole exception of 1913, there was an export balance every year in the value of Taiwan's external trade. Most of its entire trade was carried on with Japan—over 90 per cent after 1930 if Manchuria and Korea are included.[3] Related to the total value of exports, the balance amounted to a steady share of about 30 to 40 per cent of all exports to Japan, 25 to 30 per cent of all exports to the entire world, that were not paid for in the form of imports of commodities (see Table 4). It is not proper to infer from these figures that Taiwan occupied a "favorable" position, since apparently the balance was merely carried on the books of a few companies with home offices in Japan. This being the case, such figures probably even understate the amounts taken out.[4]

The Role of Government Policy

By implication, the foregoing account reveals that colonial rule yielded quick and gratifying results in Taiwan. These were not

that they fell for Taiwanese. It does seem certain that on the average they must have risen somewhat, but that they did not move very far one way or the other. Undoubtedly some Taiwanese who took part in the new developments became richer, and many who did not became poorer. Agricultural output per farmer definitely increased, as the next chapter will show. There are figures (see Ch'en Cheng-hsiang, 1950, p. 151) that suggest a slight falling off of rice consumption per person, but they must be computed in a way that weakens their reliability. However, the large additions to Taiwan's economy under the Japanese were the new productive facilities, fixed equipment and market organization, which it is the purpose of this chapter to document. There is no way of showing how these improvements were shared by the Taiwanese, though we know that the Japanese took steps to keep the major shares to themselves.

[3] It is fairer to consolidate the "Yen Bloc" as a whole in computing these balances. To some extent imports from Manchuria and Korea were used to offset the account with Japan; this combined account shows a smaller balance than the account with Japan alone in most years. Separate data for Manchuria were not available in preparing Table 4. Aside from their monetary value on a balance sheet, the articles imported from Manchuria and Korea had a special importance, for they consisted mainly of fertilizers that were indispensable to Taiwanese agriculture.

[4] Grajdanzev (1942), p. 157, claims that the export balance cannot be materially reduced by taking account of hidden items; many of these, such as cash remittances to Japan, would actually increase it.

52:Barclay S-5 (nodate)1954 ADI Formosa ADI

439

TABLE 4

VALUE OF EXPORTS FROM TAIWAN, BY PLACE OF DESTINATION, 1899 TO 1942*
(Thousands of Yen)

Years	Total Exports	Exports to Japan and Korea	Per Cent of All Exports Going to Japan and Korea	Balance of All Exports over All Imports	
				Amount	Per Cent of Balance to Total Exports
1899-1909	24,659	13,932	56.5	−1,574†	−6.4†
1910-1914	59,936	46,727	78.0	4,212	7.0
1915-1919	130,192	98,929	76.0	36,943	28.4
1920-1924	195,767	163,566	83.6	62,039	31.7
1925-1929	256,326	214,533	83.7	65,862	25.7
1930-1934	251,476	230,579	91.7	75,720	30.1
1935-1939	445,653	402,641	90.3	115,005	25.8
1940-1942	527,699	419,570	79.5	97,419	18.5

* Figures are yearly averages over each period.
† (−) indicates an import balance.
Source: *Statistical Summary*, Table 321.

52:Barclay S-5 (nodate)1954 AD1 Formosa AD1

"ECONOMIC DEVELOPMENT" IN TAIWAN

439

The most efficient view of total changes in the island's economy is by reference to its statistics of trade. As indicated above (Table 4), Japan succeeded in securing practically all of Taiwan's external trade to itself, if exports to Korea are counted. During the 1930's even traffic with China, just across the Straits, was almost eliminated.

Compared with a wide range of other Far Eastern countries, Taiwan under the Japanese came to hold a surprisingly high rank in the value of trade per person. At its peak shortly before 1940, the total per capita value of its trade was well above even that of Japan (see Table 5). Since this rank was attained under peculiar conditions,

TABLE 5
ESTIMATED PER CAPITA VALUE OF FOREIGN TRADE OF FAR EASTERN COUNTRIES CIRCA 1939*

(Expressed in U.S. Dollar Equivalents)

Country	Year	Imports	Exports	Total
New Zealand	1939	109	127	236
British Malaya	1939	61	72	133
Australia	1938–39	67	64	131
TAIWAN	1937	16	23	39
Korea	1939	15	11	26
Japan Proper	1939	10	13	23
Philippine Islands	1939	8	10	18
Burma	1938–39	5	12	17
Netherlands East Indies	1939	4	6	10
Thailand	1938–39	4	5	9
French Indo-China	1937	3	4	7
China	1939	0.85	0.25	1

* As reproduced in OPNAV, Civil Affairs Handbook. *Taiwan—Economic Supplement* (1944), p. 73.

Source: Far Eastern Unit, Bureau of Foreign and Domestic Commerce, U.S. Department of Commerce.

however, it does not mark Taiwan as an especially "advanced" area (in the sense of supporting bountiful levels of living) except by reference to the Japanese residents in the island.

Taiwan's position in trade with the outside world was created by heavy and increasing exports of a few products, mainly crops sent abroad in only slightly processed state. Compared with what took place in Taiwan's business and financial communities, there was remarkably little shift in the composition of its agricultural output

241
433

1 [p. 21- Analyst]

52:Barclay S-5 (nodate)1954 AD1 Formosa AD1

Land that was improved in this manner not only yielded more at each harvest: over a third of the paddy land yielded more than one harvest each year. Under schemes for rotation and inter-cropping devised by the Japanese, it was not unusual to take three separate harvests from many of these fields in a year.

The labor of preparing the land, of weeding, and of harvesting was not saved by these changes. They may have involved some net additions—irrigation became a more complicated process in some cases, and the aqueducts for transporting the water required special maintenance. Japanese were aware that the soil could not be farmed more intensively without losing some of its fertility, and encouraged the use of commercial fertilizers, much of which they required to be prepared on the island. The remainder comprised the largest single category of Taiwan's capital imports, greater in value than the iron and steel and machinery which are sometimes identified with the needs of agrarian countries. Importing fertilizers for sale in Taiwan proved to be a profitable line of business; it was reported to be firmly in the hands of a few large Japanese concerns, a fact which should occasion no surprise. It was shortage of fertilizers that brought on declines in average yields of crops after 1940 (see Table 6, above).

The shift in official plans for Taiwan after 1930 leads one to look for some indication of results in the composition of Taiwan's products. The search is not very rewarding. In terms of gross value of product, agriculture did not lose its place as the foremost line of production until 1940 and later. Then it exchanged ranks with "Industry"—because farm produce fell off momentarily rather than because of any sharp rise in manufacturing (see Table 7).[32] The steady but slow decline in the share of agricultural production in earlier years had indicated a tendency to submit more of the agricultural produce to processing before it left the island, and not a shift from farming to manufacturing.

It is when the category of "industrial" production is examined in detail that some of the more recent trends emerge. In Table 8, evidently industry in Taiwan had always been centered around food products. Until the mid-'thirties these had amounted to three-quarters of the value of all manufactures. Only from then on did the effects of new economic goals begin to appear. The largest advances were made in some of the fields that had been smallest, espe-

[32] The sharp rise in the numbers of Table 7 was largely a matter of currency inflation.

52:Barclay S-5 (nodate)1954 AD1 Formosa AD1

Furthermore, higher officials were themselves aliens, responsible ultimately to the Manchu court. Their tenure depended on their standing in Peking. Special competence or energy in office was not an advantage—it could even be dangerous, by making them targets of rumor and innuendo. Careers were sometimes ruined on the suspicion that certain officials had separatist leanings or were friendly to foreigners. Personnel were transferred regularly, as in China, to remove them from temptations of familiarity with their offices. Their only safe path to success was to maintain stability in local affairs, and somehow to prevent civil discontent from turning into civil disturbance.

This system was calculated to engross its key officers in their personal relations with Peking. It proved to be more effective in ensuring loyalty than in promoting careful government or preventing corruption. There were few deterrents to peculation in office, which was respectable if prudently pursued, and surrounded by many opportunities—such as legal monopolies and illicit export trade—not present in China itself.

These limited and negative objectives of government invited continual lapses of internal rule. Being unfamiliar with local conditions, officials simply did not govern in rural villages. Throughout the countryside they kept the peace by intrigue with powerful families rather than through actual administration—families that relied heavily on property obligations among the peasantry to uphold their influence. The situation put a strain on the administration's own underpinnings, and led to severity in abuses and civil strife to which the mainland itself was unaccustomed. It is a testimony to the serviceability of traditional Chinese institutions that they survived this test.

Whatever its internal shortcomings, this scheme of political order was well suited to rebuff foreigners, at least foreigners whose advances were not backed by force. Acute frustration among the Western commercial agents in Taiwan stands as evidence that it was accomplishing this part of its purpose. They complained bitterly that officials had connived at Taiwanese violence against Europeans and had even incited such incidents.[8]

The best information available about Taiwan's external contacts is contained in the published reminiscences and travel accounts of foreign trading representatives. The literary interests of these men throw light on the main preoccupation of their trading activities.

[8] For example, see Pickering, W. A. (1898), Ch. 17.

52:Barclay S-5 (no date)1954 AD1 Formosa AD1

439 1777 Though their books have a wealth of illuminating anecdotes about the export trade, they provide almost no observations of any value about the ordinary affairs of the population. One might imagine from reading such sources that everyone in Taiwan was engaged in foreign commerce or some form of government service.[4]

These informants were, up to a point, honest men. They were not trying to mislead, and deserve credit for considerable acuteness and sincerity. The most likely reason for their failure to inform us about the Taiwanese is that they never had a chance to find out for themselves. Western merchants simply had no occasion to form more than special business associations with Taiwanese. Practically all of their transactions were conducted by contract merchants ("compradors") as middlemen. Foreigners not infrequently made efforts to interfere in internal affairs, but these all arose over specific issues. They were attempts to make the social order more nearly serve their ends, not to alter it.

As in China, trading relations carried on in this manner did not further the exchange of ideas along with commodities. They were contrived so as to minimize such interchange. This mutual aloofness worked both ways: it enabled outsiders to get along in ignorance of conditions prevailing in the island, and at the same time shielded the general population from contact with the outside world. Foreign commerce, the foremost potential channel for innovation until the conquest by Japan, was severely circumscribed by seclusiveness of the parties on both sides.

1777 438 The reasons for this isolation are not all to be found in the hostility of officials or in the provincialism of Westerners. The foreigners were eager to obtrude their presence further into foreign trade, even if only on their own terms. Government officers were too inept as administrators, their conduct too deeply undermined by directives from above, to succeed in stifling any positive tendencies toward change if such had arisen. The real bulwark of conservatism behind

[4] These authors made better traders than ethnographers. They often did not go beyond expressing impatience that Taiwanese should not follow 19th century English trading conventions. The best and most comprehensive of these works (Davidson, James W., [1903]), out of a total of 32 chapters, devoted only a single superficial one to "The Inhabitants of Formosa," where the author did little more than describe the aborigines. The apparent exceptions prove the rule. If good material about those Taiwanese of Chinese origin is scarce, books about the aborigines of the interior (of varying quality) are not. Few Westerners penetrated to the dangerous mountain regions of Taiwan, but all of them developed immense curiosity about the customs of these "savages," which was not held toward the Chinese. See, for example, the titles in Takekoshi, Yosaburo (1907), pp. 321-342.

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien
Formosa AD1

With the advent of the Japanese in 1895, Lukang very soon lost its importance as a port, for Japan's plans for the colonization of Taiwan did not include maintaining Lukang as a trade and immigration center. The Japanese set about cutting off the movement of people and goods between Taiwan and the mainland, and, to divert the colony's trade from China to Japan, they built the port of Keelung in northern Taiwan (Barclay, 1954b:12, 18–42). The demise of Lukang both as a port and as a major urban center was hastened by the silting up of the harbor, which had begun even before the coming of the Japanese. As a result of Japanese indifference to Lukang as a port, the harbor soon became unusable.

The final blow by which the Japanese doomed Lukang's importance was the routing of the extensive west coast railroad system far from Lukang. The city could then neither be maintained as a major market town nor as a point of trans-shipment for the area's produce. Its decline as an urban center and as an influence on the surrounding area was reflected in an accompanying population decrease from one hundred thousand in the late eighteenth century to fifty-one thousand in 1951 (*Women te Lukang Chen*, 1951). The decrease took place despite the high rate of population growth in the rest of Taiwan.

Today, Lukang stands several miles from the sea, a city much diminished in size and importance. It offers little economic opportunity for its inhabitants, and despite some light industry, few village people are employed there. Nevertheless, although it is now a small, out-of-the-way city, it offers nearby villagers a convenient local marketplace and a center for some entertainment. Most important, it still functions as a religious center. From the earliest times the Chinese immigrants brought their gods with them from the mainland to Taiwan. These gods and goddesses, such as Matsu, became firmly established as important deities in Taiwan; the Matsu temple in Lukang is believed by the people of the area to be the oldest or second oldest Matsu temple on the island. For this reason Lukang is still one of the most important focal points for the religious pilgrimages of those who maintain loyalty to the Goddess Matsu.

The historical picture of this area at the time of the late Ch'ing dynasty comes from data furnished by older or better educated residents of the area and several local Chinese and Japanese gazetteers.[3] These various sources were used, wherever possible, to corroborate one another. The sources note that in the late nineteenth century the area was sparsely populated and that its inhabitants lived in constant fear of bandits. Up to the early part of the twentieth century dry farming produced most of the staples grown, since there was only a very limited system of irrigation. Crops like wheat, soybeans, sorghum, sweet potatoes, peanuts, a plant used to make dye for cloth, and broom grass were

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5
Formosa AD1

greater labor force, and this absorbed the men who had formerly worked in Lukang.

The expanded area of land under cultivation increased the food supply and generally improved the standard of living. In addition, the Japanese introduced some Western public health ideas and new means for controlling disease. Apparently, these factors are closely related to the extensive population growth which then began to take place in Taiwan. The Japanese also improved the primitive communication systems of the area. A major program of electrification and improvement of rail and bus lines was instituted throughout the heavily populated areas of the island.

The material influence of the Japanese occupation and administration of Taiwan was enormous. Not only did Japan create in Taiwan an important element of its colonial empire but in so doing it indirectly began to produce important economic changes which had implications for the development of the rural areas and the island itself. While agriculture provided the major portion of Taiwan's exports to the home country, new, imported commodities also became readily available to the Taiwanese villager at low prices; many inexpensive canned foods became common in the village household. In spite of these changes, the world depression had apparently little effect in the Hsin Hsing area. In fact, few villagers were even aware that there was a world depression in 1929 and in the 1930's, which may be due to the almost total lack of industry in rural Taiwan or in Taiwan generally at that time.

The advent of the Japanese brought a higher standard of living for the Taiwanese people, but the improvements were offset by the war with China in 1937 and, more notably, by the entrance of the United States into the war in 1941. Japan had to muster all its own resources and those of its colonies, and good times soon turned into hard times for the Taiwanese farmer. At first, village men were lured off the land to work at high pay on Japanese construction projects, and others were conscripted to work in Japanese army labor gangs in both Taiwan and in Southeast Asia. Often families were left with only the women, children, and old men to work the land. The supply of artificial fertilizer which had been so important in developing intensive rice cultivation was almost completely cut off. The little food that could be produced under these difficult conditions was usually confiscated by the Japanese authorities to supplement the food supplies in Japan, and villagers were frequently reduced to a diet consisting mostly of sweet potatoes. The gratitude they had felt for the prewar accomplishments of the Japanese was offset by the severity of Japanese rule during the hard war years.

The defeat of the Japanese and the coming of the Chinese National-

1:Gallin E-4,5 (1957-1958) 1966
AD5 Taiwan Hokkien AD5
Taiwan AD6
Formosa AD1

and seeing the show, and only partially because of the cost. When the villagers do attend, they generally go in small groups of young boys, or young girls, or a group of older women.

CLOTHING

The villagers' clothing, like their food, is marked by simplicity and a show of thrift. It is not at all uncommon to see a villager wearing work clothes which have been patched several times. Even for special occasions such as a marriage or a large *pai-pai* festival most villagers still dress very simply.

The style of clothing usually varies with age. Older villagers generally wear the traditional Chinese clothing of pantaloons and jacket, although in very hot weather men of all ages wear shorts and a T-shirt when working. In colder weather boys and men (other than the older and more traditionally dressed men) wear ordinary khaki wash pants and several shirts, and a sweater or jacket if they happen to own one. For protection against the cold, a villager depends on a number of layers of clothing, usually cotton, rather than a few layers of woolen items. The cotton padded jacket is worn more by older men and women than by young people.

While older women wear the more traditional clothing, younger women and girls prefer and usually wear the Western-style dresses, skirts, and blouses which have become very popular since the war. Such clothes are usually made to order either by village seamstresses or in Lukang. Young girls and women wear the Chinese tunic dress (*ch'i p'ao*) on the occasion of their marriage, on special outings to Lukang or Taipei, and during important village festivals. Many of the older villagers tell of the old days when "everyone, including the rich, wore coarse cloth, since in those days people were thrifty." But today, these old people complain, "people are no longer satisfied with coarse cloth and want to wear the better cloth."

Still, few villagers remember ever having made their own cloth. "Cloth has practically always been purchased in Lukang or from itinerant merchants." Before the Japanese period, inexpensive undyed cloth was apparently imported from the mainland, and during the Japanese period, cloth manufactured in Japan was used. Since the end of the war, the Taiwanese textile industry has grown rapidly, mainly in the vicinity of Chang-hua City and Ho-mei, and today all the cloth used by villagers is Taiwanese-made.

Nowadays there is a great deal of specialization, and it is both uneconomical and difficult for villagers to make their own clothing unless a member of the household, usually one of the daughters, has studied sewing. A family's clothing is usually made to order by locally

52:Steiner S-4 (no date) 1951
AF1 China
FORMOSA AD1

433 figure for rice acreage registers an increase of 156 per cent over 1945, while the rice yield shows an increase of 221 per cent. There are also gains in sweet potatoes, wheat, sugar cane, tea, fruits, and other agricultural produce. Among the factors contributing to this growth are the fertilizer assistance program under ECA, incentive generated by the rent reduction program, irrigation and reclamation projects, and rural co-operative projects, health work, and improved-seed distribution sponsored by the Chinese-American Joint Committee of Rural Rehabilitation.[34]

Industry

439 The Nationalist policies toward industry may be reflected by a general description of the industrial situation in Taiwan. Prior to 1945, the island was tied to Japanese over-all economy. Its agricultural productivity, for instance, was dependent on fertilizer imports from Japan. Other products, such as camphor and certain metal-bearing ores, were shipped to Japan for further processing. In recent years there has been a trend toward integration of industries. 387 The production of fertilizer, for example, has been stepped up from a 1945 low of 400 metric tons to an estimated 92,000 tons in 1951.[35] This is against an estimated 1951 demand of 340,000 metric tons in rice and sugar-cane fields 000 alone.[36] Since March 1948, a refining

ernment, *Report on Food Production** (Taipeh, 1949), pp. 33–41; *Taiwan Reconstruction**, cited note 12 *supra*, Vol. 2, pp. 383–402; *Taiwan Today*, cited note 11 *supra*, pp. 77–98.

[34] Raymond T. Moyer, "Economic Administration Program in Taiwan," address before the Chinese Association for the United Nations, March 17, 1951.

[35] *Taiwan Today*, cited note 11 *supra*, p. 108; *Taiwan Reconstruction**, cited note 12 *supra*, Vol. 2, p. 481 (1950 production was estimated to be 55,000 metric tons).

[36] *Taiwan Today*, p. 107; also cf. *Taiwan*

[P. 219(A)]

Since March 1948, a refining process has been instituted in the government-managed camphor industry.[37] In areas where Taiwan and Japanese economy complement each other, a trade agreement was signed with Japan on September 6, 1949 under which Taiwan sugar, salt, camphor, cement, and pears are to be exchanged for Japanese consumer and capital goods at an estimated annual volume of US$100,000,000.[38]

AF1 China FORMOSA AP 655 278 439 648

Government-owned and -operated enterprises dominate Taiwan's industrial field. As of 1950, there were 79,058 publicly operated units employing 63,-065 workers. Available statistics place privately owned industrial units at approximately 67,660 employing 53,310 workers. Production figure for public industries in 1949 is about NT$718,000,-000 as against NT$600,000,000 for private enterprises.[39]

655 471

This situation may be accounted for by the predominant position of Japanese-owned industries in Taiwan which were acquired by the Chinese Nationalist government following the Japanese surrender in September 1945. Since then, petroleum, aluminum, gold and copper mining, salt, coal mining, and steel works have been taken over by the National Government. Power, sugar, fertilizer, cement, alkali, pulp and paper, shipbuilding, and machine tools have been jointly operated by the national and provincial authorities on a capital division of 6 to 4. Some smaller mining units, camphor, tobacco and wine monopoly, and agricultural and forestry enterprises have been managed by the provincial government. The rest, being of smaller scale, have either been taken over by county or municipal govern-

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*Reconstruction**, Vol. 2, pp. 473–74, where the total 1948 demand was estimated to be 141,727 tons.

[37] For a general description, see *Taiwan Reconstruction**, Vol. 2, pp. 436–46.

[38] For detailed listings, see *Taiwan Reconstruction**, Vol. 2, pp. 357–61.

[39] *Taiwan Today*, pp. 121–22.

[p. 219(8)]